RESTORATIVE JUSTICE AND EMOTIONAL LITERACY

Using Restorative Conversation as a Targeted Intervention for Students who get involved in Peer Conflict: A Multiple Base Line Design

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Abstract

Restorative Justice (RJ) has its origins in the criminal justice system and in recent years has received growing interest as an alternative method for classroom management and behaviour in schools. RJ sees misbehaviour as a breach to people's relationships rather than school's rules thereby puts repairing those relationships as more important than blaming and punishing the wrong doing. RJ is based on the premise that most people care about others and are interested in forming healthy and long lasting relationships. However, for this to happen people need a certain level of understanding and control over their own emotions and those of others. Hence this thesis aimed to explore the fields of RJ and Emotional Literacy (EL) skills independently despite being conceptually linked through the management and understanding of emotions and how this eventually may have an impact in students' behaviour.

The Review Paper consists of a systematic review of the literature on the effectiveness of Emotional literacy interventions in schools. Even though there is already a large amount of research on social emotional learning programmes, this review is the first of its type to explore EL skills as a separate construct from social skills. Thirteen studies were evaluated. Overall the findings shown a pattern of small and at times non-existent effect sizes. In other words, the impact of EL interventions was found to be limited in promoting students' EL skills only. However, similarly to other reviews' outcomes, other areas such as social skills, academic achievement and behavioural difficulties showed significant improvements suggesting that EL interventions are still worth investing in. Recommendations on how to improve the efficiency of the interventions is discussed.

The Empirical Paper aimed to explore the impact that an abbreviated version of the RJ conference called Restorative Conversation had in reducing peer conflict incidents and promoting pro-social behaviour in five primary school students. A single case experimental study with multiple baselines was used to analyse visual data obtained from students' behaviour. Overall, the intervention showed a decreasing trend in peer conflict incidents in four of the five participants, however, only two of these results were found to be statistically significant. In relation to pro-social behaviour, the intervention appeared to yield contradictory results such as two significant but negative effects were found. Fidelity of the implementation was maintained, suggesting the intervention is appropriate for delivery in school settings. Recommendations and implications for future research and discussion of the limitations are considered.

Table of Contents

Appendices

List of Tables

List of Figures

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'I can do all things through Christ who strengthens me'. Philippians 4:13

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CHAPTER 1

Introduction to the Thesis

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1.1 Introduction

This chapter will outline an overview of the whole thesis. It will start by explaining the rationale for the topic selection, the epistemological position and theoretical perspective which have informed the research work undertaken, as well as the methodology and methods used in the study (for a visual representation of these four elements, see Figure 1.1). This chapter will end with a brief description of the following three chapters.

1.2 Rationale for Topic Selection and link between the Review Paper and the Empirical Paper

Initially this whole thesis aimed to explore the area of Restorative Justice (RJ) as a school intervention and its possible benefits to students' behaviour. However, after an in-depth search of the literature it was noted that RJ is still in its infancy with limited research into its effectiveness. It has even been described by some authors as a theoretical framework which 'is ripe for further experimentation and research'(Hostetler, 2014, p. 157). In fact, most of the evidence for the use of RJ in education comes from the broader field of Restorative Approaches (RA). This field also revealed a significant lack of empirical research in terms of quantitative studies that could support the promising evidence that qualitative studies have shown in recent years about the effects of RA on students' behaviour (Kane, Lloyd, Mccluskey, Riddell, & Stead, 2006; Stinchcomb, Bazemore, & Riestenberg, 2006; Thompson & Smith, 2011; Youth Justice Board, 2004). As a consequence, this thesis took a wider approach for the review paper and explored what seems to be an essential prerequisite for the success of RJ or RA in schools: emotional literacy (EL) skills (Kelly & Thorsborne, 2014).

This thesis then narrows the focus from EL interventions to the exploration of Restorative Conversation (RC) as a simplified version of RJ. Hence the empirical paper attempts to contribute to, and fill in the gaps between, theory and practice in the area of RJ involving students who enter into conflict with their peers (Casey, Curry, Burton, & Gribben, 2014).

Restorative Justice has its origins in the criminal justice system and only recently has been considered as an alternative to punitive approaches in managing students' behaviour. It has been argued that behavioural approaches that concentrate on dealing with the behaviour alone by simply punishing it, instead of aiming to understand the emotional, social and environmental causes of behaviour, are destined to fail (Vernon, 2014; Weare & Gray, 2003). Punitive methods can resemble a criminal justice system which, far from cultivating an environment where problems are solved in a positive way, can model a culture of violence and aggression, tending to dehumanize the people involved by bringing shame and harm on students who have probably already been hurt (Hostetler, 2014; Vernon, 2014, pg. 52; Weare & Gray, 2003, p.23). Instead, research shows that behavioural policies which have a more holistic approach, focussing on students' attitudes, values, feelings and behaviours, are more effective in not only modifying behaviour but also tackling the underlying causes of it (Morgan, 1983). Therefore, the following statement encapsulates the concept which the empirical paper adopted for the exploration of RJ: 'to respond 'restoratively' towards wrong doing is to have the harm caused in mind rather than the rule broken, and to seek to empower those involved to put things right' (Hopkins, 2007, p.7). In other words, caring about the potential breach in human relationships rather than the potential consequences of misbehaviour (Hopkins, 2003).

Affect Script Psychology (ASP), pioneered by Silvan Tomkins in the 1960s, states that the theoretical basis of RJ and its main tool (i.e. conferences) work because most people care about each other. Most people care about being part of a community which permits the mutual exchange of information, eventually allowing them to maximise positive affect and minimise negative affect (Casey et al., 2014). This, according to Tomkins, works because everyone has a basic set of nine inborn affects which are the biological building blocks for feelings and emotions (Vernon, 2014). This common bio-emotional foundation is what persuades most people to form close relationships and look for reconciliation when these relationships seem at risk (Vernon, 2014); this is the very basis of RJ.

At this point, it is useful to define affects, emotions and feelings. Affects are short-lived biological responses to stimuli in the environment. Feelings are the process of becoming consciously aware that an affect has been triggered. Lastly, emotions are scripted responses which have been shaped by the complex interaction between a child's culture, social environment, relationships and temperament. That is, while affects are universally shared among human beings, emotions are a bio-psycho-social phenomenon unique to each person (Vernon, 2014). Hence, in order to be able to form lasting relationships and care for others effectively students need to be able to recognise, understand, handle and express their own emotions and be aware of the emotions of others (Faupel, 2003). In other words, students need to be able to develop emotional literacy (EL) skills which will enable them to become warm and caring human beings who can form worthwhile relationships with others.

Consequently, it appears clear that for RJ to be effective students need to have at least a minimal mastery of EL skills. In other words, at least a minimal understanding and awareness of their own emotions and those of others. This is what

led this thesis to explore both RJ and EL, as research in these fields will directly contribute to a better understanding of the theory, as well as make improvements in the practice and implementation of RJ and EL as forms of school-based interventions in the fields of education and educational psychology.

1.3 Epistemological Stance

In order to plan and execute a well organised piece of research four elements need to be in place: epistemology, theoretical perspective, methodology and methods. Each one of these elements influences another in a 'top-down' approach before the research process has started and while the research is being carried out (Crotty, 1998) as depicted in Figure 1. All of these elements will be described in more detail below.

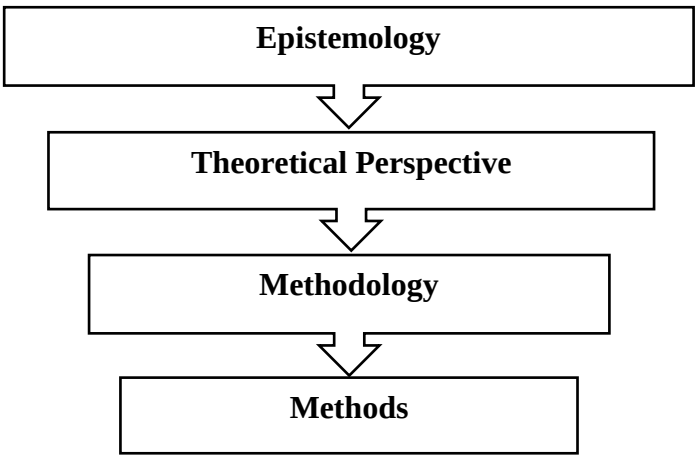

Figure 1.1 The four elements that shape a research study (Crotty, 1998, p.4)

1.4 Epistemology

According to Barker, Pistrang and Elliott (2002), ***epistemology*** is 'how we come to know things or believe them to be true or real' (p.11). In other words 'how we

know what we know' (Crotty, 1998, p.3). ***Ontology*** is another philosophical concept which complements the notion of epistemology and explains the view and nature of reality or the existence of something. More clearly it answers the question: 'what is [out there to be known]?' (Crotty, 1998).

These two concepts form the foundations needed to understand how this study has considered a particular social phenomenon, made sense of it, decided how to explore it, and consequently presented the outcomes of that exploration (Crotty, 1998). Both concepts have directly influenced the choice of theoretical perspective and, subsequently, the methodology adopted by the author.

Even though there are a range of epistemologies, according to Crotty (1998) there are three main epistemological positions which could guide how we come to know things: objectivism, constructionism, and subjectivism.

Objectivism is the traditional approach which posits that meaning and meaningful reality exist independently of human consciousness. To exemplify this in real terms, a researcher who chooses objectivism would attempt to 'discover' meaning independently of their own thoughts, beliefs and previous experiences.

In contrast, *constructionism* is an approach which posits that there is no such thing as an objective truth ready to be discovered, but, instead, meaning is co-constructed through the interaction between a mind and the world around us. It is important to consider that different people will construct meaning in different ways despite referring to the same phenomenon. For example, a researcher using this stance could explore a particular social phenomenon, considering how his/her culture and the participants' cultural perspective would influence the understanding of the world within that society at that specific point in time.

Lastly, and unlike the previous two stances, *subjectivism* is a position which does not need an object or an interaction to make sense of the world. Instead, meaning is imposed on the world by the mind (Crotty, 1998). For example, a researcher using this epistemological stance would give meaning to something by concentrating on his/her previous understanding of the world (e.g. religious beliefs, experiences, dreams) and not by interacting with the object.

Consequently, the epistemological stance which underpins this study is **constructionism** as this research has been theory-driven and the author has purposely interacted with the participants and their reality at a specific point in time, thus using her mind and the result of the interaction to create meaning about the issues explored.

1.5 Theoretical Perspective

Theoretical perspective is the philosophical stance which informs the methodology used in a piece of research and thus provides the context that shapes the rest of the study (Crotty, 1998). After considering a number of theoretical perspectives, pondering their possible influence on the different aspects of the study and acknowledging that combining theoretical perspectives has often been considered a taboo in traditional research (Henderson, 2011), it was decided that the empirical paper was informed by two theoretical perspectives: post-positivism and pragmatism. Both of these perspectives fit within a constructionist epistemology and complement each other.

Nevertheless, it is important to mention the theoretical perspectives which were considered and rejected, such as social constructionism and positivism.

Social constructionism was considered for this piece of research because at the beginning of the process the researcher and the teachers jointly thought of examples which could represent the concept of the explored issue: peer conflict. However, this theoretical stance was rejected as neither the collection, analysis, nor the interpretation of data involved a process of active construction of meaning (Barker et al., 2002). Instead, it followed more stringent guidelines that characterise quantitative research, such as reliability and validity.

For this reason, *positivism* was also considered a feasible perspective. Yet, positivism as a unique stance was also rejected because it was acknowledged that even though it is an informative paradigm, it was felt that there is no such thing as an objective reality based in pure rationality. Also, it is not possible to gather neutral data when exploring social issues. In other words, the researcher as a reflective practitioner is unable to produce a piece of research in isolation of their personal values and perspectives, those of the participants, and those of the environment (Fox, 2003; Manjikian, 2013).

In its place, ***post-positivism*** was the first theoretical perspective adopted in this study. It is a more suitable alternative as it still adheres to scientific rules and aims for objectivity in the research process but it is also understanding of the fact that knowledge is not neutral and is socially constructed (Clark, 1998; Henderson, 2011). Thus, post-positivism can be described as a broader theoretical stance, elements of which are found in the present study. For example, post-positivism gives scope for the researcher's motivation and commitment to a topic by bringing theory and practice together (Ryan, 2006). It gives the researcher more freedom to interact with her environment, including the participants (Willis, 2007). It recognises the need to use triangulation as a key way of gaining a more accurate view of reality by

considering possible errors in measurement (Ryan, 2006). Furthermore, post-positivism also allows for research to be carried out in natural settings and for the use of other forms of inquiry, such as visual analysis which could subsequently lead to solutions to real-life problems (Henderson, 2011; Stewart & Floyd, 2004).

In the context of this piece of research, post-positivism guided the researcher in all the elements already mentioned, as well as in the decision to choose an alternative quantitative method different to the popular 'gold standard' Randomised Control Trial (RCT). In place of an RCT design, this study used a single case design but still stuck to strict empirical rules to guarantee the objectivity, validity, and reliability of the outcomes. This theoretical perspective allowed the researcher to gain an insight into the research topic by reading previous work in the area, becoming motivated by the topic, and permitting her previous knowledge and experience to influence the research process. This stance also allowed the researcher to use a range of triangulation methods for the selecting of participants and collecting and analysing of the data, such as that collected from questionnaires, visual analysis, and informal conversations. Finally, this stance allowed the researcher to carry out the study in natural settings, such as schools, and to have the freedom to interact with the participants. All of these aspects are also explicitly linked to pragmatism.

As a result of this, pragmatism was the second theoretical perspective adopted to inform the methodology used in this research. ***Pragmatism*** is driven by inquiry and the desire to find solutions to real-life problems (Teddlie & Tashakkori, 2010). In other words, the drive behind the research comes from exploring 'what works' or what brings benefits for a particular issue instead of simply looking for the 'truth' (Robson, 2011). Also, pragmatism is flexible enough to be adopted in combination with other paradigms (Teddlie & Tashakkori, 2010) and encourages the use of

different research methods and approaches (Dewey, 2008). In the context of this research, pragmatism essentially fuelled the researcher's interest in finding out whether the intervention used had any impact for students who were getting involved in peer conflict. This was the main question of the empirical paper.

1.6 Research Methodology

The methodology is the strategy or plan of action that will inform the chosen method(s) to obtain the desired outcomes (Crotty, 1998). The research design employed in the empirical paper of this thesis was a Single Case Design (SCD) with non-concurrent multiple baselines and pre-post measures taken. This methodology was selected due to the overuse of qualitative methodologies in the area of Restorative Justice and the existing gap of other types of methodologies found in the current literature.

Additionally, other factors were carefully considered in order to decide on the use of SCD as the best methodology for this study. For example, Restorative Conversation aims for students to think about their actions as a breach to human relationships instead of a breach of school rules. This means that an adult using this approach would encourage students to reflect on their behaviour, the consequences it has on other people's lives, and subsequently how a relationship with another person could be repaired. Due to these factors, it was decided that it would be unethical to stop the intervention at the end of the study. Also, it was assumed that giving students the opportunity to have meaningful conversations with adults would mean that permanent changes could be seen in their behaviour. Therefore, SCD was considered appropriate for dealing with both of these potential issues (T. R. Kratochwill et al., 2010; J. D. Smith, 2012).

In addition, as the intervention being investigated was meant to be used with individual students, it was considered important to select a design that would facilitate the analysis of the behaviour of individuals rather than a group. Single case methods have been found to be the most suitable when the focus of analysis is the behavioural repertoire of an individual (Horner et al., 2005; Morgan & Morgan, 2001). This approach also aided the exploration of whether the intervention 'worked' or not in reducing peer conflict behaviour. As described above, this was informed by a pragmatic stance.

Moreover, as already explained above, post-positivism guided most of the aspects of this study so it was important to select a research method which would preserve the objectivity and scientific strictness in order to obtain valid and reliable results. SCD was recognised to meet these standards as it provides a strong basis for establishing causal inferences between interventions and outcomes studied, so SCD can be considered an experimental approach (Morgan & Morgan, 2001). Also, SCD is widely used in the fields of psychology and education (Kratochwill et al., 2010).

1.7 Method Selection

The methods used in a research project are the techniques or procedures adopted to gather and analyse the data that will be used to answer the research questions and hypotheses (Crotty, 1998). The empirical paper aimed to explore the impact that Restorative Conversations had on students who engaged in peer conflict. Therefore, two research questions and four hypotheses were generated. Overall, they aimed to explore whether the intervention would help to reduce the number of peer conflict incidents and/or increase pro-social behaviour in the participants. In order to provide answers to these questions, multi-method and multi-informant approaches were employed.

Before the intervention took place, participants were selected by a careful identification process which included the triangulation of data from teachers and peers. Students' frequency of engagement in peer conflict incidents was measured by daily observations of students' behaviour before and during the intervention, at different times, and in different school environments, such as in the classroom, at break-time, and at play-time. This provided visual information which was then statistically analysed. Similarly, students' frequency of pro-social acts was also evaluated through visual analysis and self-reported questionnaires that students filled in before and after the intervention. Lastly, students' emotional literacy skills and social competence abilities were evaluated with the use of a pre-intervention and post-intervention questionnaire. The reliability of the behavioural observations was checked using the inter-observer agreement with Kendall's Tau-b once a month over the three month period the intervention was run for. The researcher and the person who had observed the students the most sat together and independently rated the students' behaviour for at least 15 minutes.

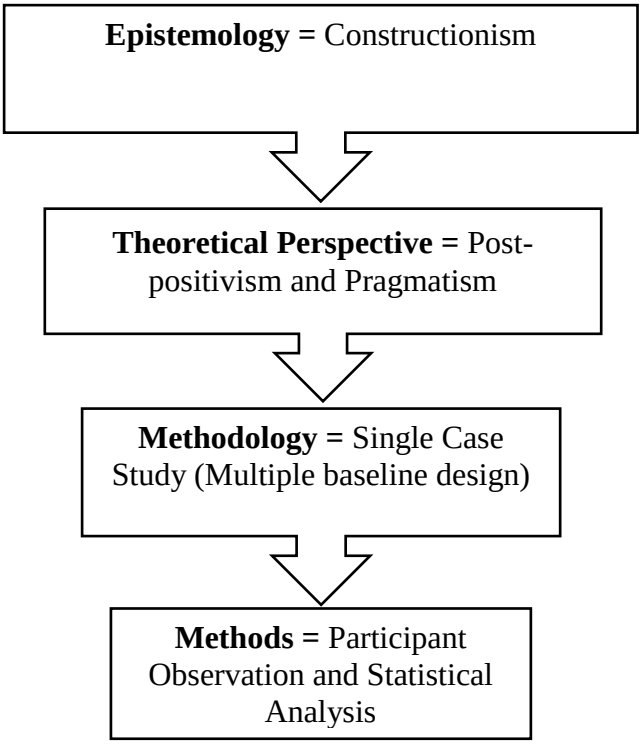

Figure 1.2 Visual representation of the four elements which have informed this study (Adapted from Crotty, 1998, p.4)

1.8 Overview of Thesis Content: Volume One

The importance of understanding personal emotions and the emotions of others, as well as knowing how these can translate into the interaction students have with their peers (i.e. getting involved in conflict, or engaging in purposeful acts to help others) are common themes throughout this volume.

This thesis consists of three further chapters. Chapter 2 is a review of the current literature on the effectiveness of Emotional Literacy (EL) interventions on students' EL skills. This review is the first of its type to attempt to separate the outcomes between EL skills and other related constructs, such as social skills. The reason being that it is theoretically important to explore whether EL skills could be considered a different construct to social skills and whether EL interventions affect them

independently. Thirteen studies which involved typically-developing children were included in the analysis; some of these studies found small effect sizes and others found no effect of the intervention. Consequently, it was concluded that EL interventions have a limited impact in enhancing students' EL skills, even though according to previous research, other areas of students' development such as social skills, academic achievement, and behavioural difficulties show improvement in response to targeted intervention. Recommendations about how research in this area can be improved and how these interventions could be developed into stronger educational programmes, are included.

Chapter 3 describes the empirical paper of this thesis, which aimed to explore the impact that Restorative Conversation (RC) had in reducing peer conflict incidents and promoting pro-social behaviour in five primary school students. A non-concurrent multiple baseline design across students was used. The data were collected and analysed using visual methods, PEM, and Tau-U effect sizes. Overall, the intervention showed a decreasing pattern of peer conflict in four out of the five students, although only two of these results were found to be statistically significant. In relation to pro-social behaviour, findings were contradictory and less straight forward with two significant but negative effects being found. The fidelity of the implementation was sustained, suggesting that the intervention can be delivered and used in school settings by teachers. Students' and teachers' feedback supported the social validity of the programme. Recommendations for future research, and discussion of the study's limitations, are considered.

Finally, Chapter 4 discusses evidence-based practice (EBP) and practice-based research (PBR) as two complimentary approaches that educational psychologists (EPs) can use in the production of new knowledge. Additionally, this chapter looks at

the role of EPs in making knowledge accessible to different audiences, as well as outlining the dissemination strategy for the review paper and the empirical paper of this thesis. Lastly, this chapter explores ways of sharing this information with specialist and non-specialist audiences, measuring the impact that both papers may have, and providing a tentative timeline for the dissemination plan.

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CHAPTER 2

Systematic Literature Review Paper

How effective are Emotional Literacy Interventions at enhancing students' Emotional Literacy skills in schools?

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Abstract

Despite the extensive research on social and emotional learning programmes (SEL), this review is the first of its type to attempt to evaluate the efficacy of Emotional Literacy (EL) interventions and the impact they have on enhancing students' EL skills only. While in practical terms teaching EL skills exclusively could be short-sighted, it is nevertheless theoretically important to explore the possibility of emotions and 'affect' as a separate outcome from other constructs such as social skills. EL interventions are school programmes designed to instruct students on how to recognise, understand, handle and appropriately express emotions. Thirteen studies met the inclusion criteria and findings reported a pattern of small and at times non-existent effect sizes. Consequently, the impact of EL interventions was found to be limited in promoting students' EL skills. However, other areas such as social skills, academic achievement and behavioural difficulties have shown significant improvements suggesting that EL interventions are still worth investing in. Recommendations on how research in this area can be improved and how the interventions can be developed into stronger educational programmes are discussed.

2.2 Introduction

2.2.1 What is an Emotional Literacy Intervention?

Although the concept of 'Emotional Literacy' (EL) is not new, the coining of the phrase is relatively recent and mainly used in the United Kingdom (Weare & Gray, 2003). There is a wide range of terms that, to a certain extent, refer to the same construct although there is an ongoing debate about which is the most appropriate (Clarke, Morreale, Field, Hussein, & Barry, 2015). For example, the most common being: emotional intelligence (EI); social skills; social emotional learning (SEL); interpersonal and intrapersonal intelligence; emotional and social competence, emotional and social wellbeing, as well as more recently trait emotional intelligence (TEI). Due to the lack of a common language and the need for a working definition, EL interventions in this review are considered:

> School programmes aimed at fostering students' ability to recognise, understand, handle and appropriately express their own emotions, and to recognise and understand the expressed emotions of others (adapted from Faupel, 2003, p.3).

Some authors use the above terms interchangeably but in this review the phrase 'emotional literacy' has been chosen as its meaning relates to an educational context and it has been broadly adopted by Educational Psychologists and Local Authorities in the UK (Weare & Gray, 2003). Additionally, 'emotional literacy' moves away from the scientific connotation and expectation that the word 'emotional intelligence' (EI) can have. For some authors the term 'intelligence' can suggest an immutable ability that should be measured instead of taught. Contrary to this, the word 'literacy' provides the idea of a skill in progress that can be nurtured and

developed with the right support (Faupel, 2003). For example, just as a child needs to learn how different graphemes and phonemes make up specific words with unique meanings, a child also needs to learn to identify, label, express and handle emotions in themselves and others.

There is an increasing recognition of the importance of evidence-based interventions in education and even though there has been a considerable amount of work in the field of social and emotional wellbeing in England, most of the evidence still comes from the United States (Weare & Gray, 2003). In the last ten years three meta-analyses have investigated the impact of SEL interventions on a variety of intended outcomes beyond social-emotional skills (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Payton et al., 2008; Sklad, Diekstra, De Ritter, & Ben, 2012). Overall, when implemented appropriately, the three meta-analyses found the SEL interventions to be effective at improving students' social-emotional skills, attitudes about self and others, connection to school, positive social behaviour and academic achievement.

In some cases, SEL interventions seemed to improve students' academic performance by 11 to 17 percentile points (Payton et al., 2008). They also appeared to reduce students' conduct problems, emotional distress, anti-social behaviour, substance abuse and mental health problems (Durlak et al., 2011; Payton et al., 2008; Sklad et al., 2012). Even though the average effect size found by the three meta-analyses can be considered statistically small (d = .34) (EEF, 2015); according to Cohen (1988), the practical and clinical value is what needs to be put into the appropriate context and be carefully considered in relation to the potential benefits the interventions can have on children's and young people's lives (Durlak, 2009).

In the last decade a range of EL programmes have been designed and among others, two programmes have been found to have positive impact in students' SEL skills. The Social Emotional Aspects of Learning (SEAL) initiative in English primary schools (DfES, 2005) and the Promoting Alternative Thinking Strategies (PATHS) (Kusche & Greenberg, 1994) curriculum in American schools, which have both been evaluated in this review. In an initial qualitative and quasi-experimental evaluation of the SEAL, the authors found positive impact on teachers' understanding of social-emotional issues and in promoting positive behaviour. Teachers also perceived a positive impact in children's behaviour, social-emotional skills and the relationship among peers (Hallam, Rhamie, & Shaw, 2006). Additionally, significant effects have been found for the PATHS curriculum. Greenberg, Kusche, Cook and Quamma (1995) found that both mainstream and special needs pupils in year 3 and 4 improved in a range of abilities related to emotional skills such as understanding of emotions, using the right vocabulary in discussing emotional experiences and enhancing their belief in their ability to manage emotions. However, to this point in time and to my knowledge, there has not been a single study that has looked at the effectiveness of EL interventions on students' EL skills only. Consequently, this review takes up this challenge and attempts to explain the reasons in the following section.

2.2.2 Why is it important to look at Emotional Literacy skills separately to social skills?

Firstly, due to research interest. Although teaching EL skills without social or relationship skills could be seen as short-sighted and difficult – as Faupel's (2003)

definition says that EL skills are also the ability to '*respond appropriately to the emotions of others*'– implying a clear social interaction. Its exploration could provide a better understanding of what EL skills should be prioritised and fostered at certain developmental stages.

Secondly, it could be said that there is a subtle yet important difference between EL skills and social skills. On the one hand, EL skills can be understood as a cluster of abilities that develop intrinsically with the purpose of primarily aiding personal competence. This eventually informs how a person responds to others' emotions. On the other hand, the term 'social skills' sometimes can refer to the performance of appropriate behaviours and 'social competencies' to the understanding of what to do and how to do it in company of others (Frederickson & Cline, 2009). Hence, social skills could be considered a 'by-product' of EL skills or their behavioural expression. Sharp (2001) explains that social skills (or handling relationships) requires a level of mastery in EL skills first (see Table 2.1) therefore EL skills could be seen as a pre-cursor to social skills. However, it is important to acknowledge that EL skills do not develop in a vacuum but through interaction with other people. For example, during the first stages of life, babies and young children learn how to regulate and express their emotions by experiencing their parents' responses to their actions (Waters et al., 2010). Thus, EL skills are interconnected and to some extent dependent on social interaction.

Lastly, the teaching of EL has been considered the 'organising framework' in some Local Authorities in the UK by promoting these skills as of equal importance to literacy and numeracy in the school curriculum (Weare & Gray, 2003).

The following Table explains the dimensions of EL skills considered in the interventions assessed in this review. Please note that social skills have not been included in this list for the reasons mentioned above, even though they tend to be considered a dimension of EL skills by most authors (Faupel, 2003; Wigelsworth, Humphrey, & Lendrum, 2012).

Table 2.1 Definitions of the emotional literacy skills evaluated in this review

	Skill	Definition
Intra-personal competences	Self-awareness	The ability to recognise and understand our own emotions, preferences, strengths and weaknesses. Additionally, to understand and appreciate how our emotions can affect how we think, what we say and how we behave. This requires a set of sub-skills, for example developing an extensive feelings vocabulary (Sharp, 2001).
	Self-regulation	The ability to be able to control the emotional urges to act simply in the 'here and now'. It is also the capacity to think on other alternatives when confronted with a conflict (problem solving). However, it is not about denying or supressing feelings but identifying and managing those feelings for our own and others' long-term good.
	Motivation	The ability to work out where we want to get to (goals), the long-term benefits of investing on those objectives, and

		remaining resilient and optimistic towards achieving those goals.
Interpersonal competence	Empathy	The ability to read, listen and understand other people's emotions and thoughts by noticing a range of emotional messages sent through words and body language (i.e. eye contact, body posture, tone of voice, etc.).

Although EL is the preferred term used in the UK, it is not without drawbacks (Weare & Gray, 2003). For example, the EL definition used in this review draws attention to the individual and its capacities, whereas the addition of social skills would open the opportunity to explore the individual's surrounding context and the interaction with others. Nevertheless, reviews and meta-analysis have explored both constructs but not necessarily addressed this interdependence (Durlak et al., 2011; Payton et al., 2008; Sklad et al., 2012).

Due to the difficulty in separating EL skills from other abilities, all the interventions evaluated in this review have been devised to enhance EL skills alongside other abilities such as social skills, prosocial behaviour or academic performance. However, all the interventions have been developed to teach knowledge and skills from the sampling domain of emotional intelligence such as 'to recognise, understand, handle and appropriately express emotions' (Sharp, 2001) which reflects the definition of EL interventions used in this review. For this reason, different terms such as EL, EI and SEL are used inter-changeably in the analysis section.

2.2.3 Psychological Theory and History of Emotional Literacy

Neuro-psychological research is demonstrating that emotions are essential for rationality. We need them to regulate behaviour, enhance learning, think clearly, prioritise and plan (Carver, Johnson, & Joormann, 2008; Metcalf, J. & Mischel, 1999; Weissberg & Elias, 1993). There is evidence that cognitive processes are interrupted when powerful emotions, especially negative ones take over (Weissberg & Elias, 1993). Consequently, it is of vital importance to help students recognise and manage their emotions more effectively.

The conceptualisation and definition of EL has gone through a long and heated debate, a proof of this is the list of terms mentioned in the first section. Academics are yet to agree on the best way of defining, measuring, labelling and teaching EL (Clarke, Morreale, Field, Hussein, & Barry, 2015). However, most authors would agree that despite the fine differences between the labels, EL has its origins in Emotional Intelligence. Salovey and Mayer (1990) are credited for being the first social scientists to use the label of EI even though their work coincided that of Gardner and his idea of personal intelligences (Gardner, Kornhaber, & Wake, 1995). Daniel Goleman's book on *Emotional Intelligence* popularised the concept encompassing a broad range of skills and competencies, including social ones. The domains initially suggested by Salovey and Mayer (1990) have moulded the current definitions of EL. For example, Salovey and Mayer (1990) proposed that EI is mainly a social intelligence and it is made of five interrelated domains: self-awareness, the ability to manage emotions, self-motivation, empathy and relationship skills. However, due to their rather open and vague definition initially suggested, the first concept received a great deal of criticism (Frederickson & Cline, 2009).

In their efforts to improve on their original definition, they revised it as follows:

> *Emotional Intelligence involves the ability to perceive accurately, appraise and express emotions; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; the ability to regulate emotions to promote emotional and intellectual growth (p.10).*

This revised definition gave more scope for acknowledging the internal processes that occur in the individual separating them from the cluster of social skills and behavioural processes that previous definitions included (Frederickson & Cline, 2009).

This concept also concentrated on the relation between feelings, the intellectual understanding and use of emotions. This led to the creation of a cognitive model of EI that tries to explain how both emotions and reason interrelate between each other and develop at different stages (See Figure 2.1).

This 'ability model' illustrates a down-up ladder with 'perception, appraisal and expression of emotions' being the first stage of becoming aware of ones' feelings and consequently those of others. Whereas, the last stage of the model 'reflective regulation of emotions to promote emotional and intellectual growth' reflects a higher level of understanding on internal processes but also a higher level of regulation and expression of those emotions. The model also exemplifies a left to right progression within the same subcategories.

Nevertheless, this model and definition of EI has not gone without criticism. The newest concept of EL skills called 'trait emotional intelligence' (TEI) challenges this idea. On one hand, EI, as exemplified in Figure 2.1, relies on individuals being

able to achieve a certain level of mastery in the abilities described. For this reason, Salovey and Sluyter suggested that EI should be assessed through the measure of performance of psychometric tests (Mayer, Caruso, & Salovey, 1999). However, this presents the challenge of awarding 'high or low' scores to a subjective interpretation of people's emotions when no two people experience emotions in the same way.

On the other hand, TEI, which refers to 'emotion related self-perceptions and behavioural dispositions relating to the perception, processing, and utilisation of emotion-laden information' (Mavroveli, Petrides, Sangareau, & Furnham, 2009, p. 259) is measured through self-report instruments and aims to capture the level of EI that each person shows at answering questions that mimic 'emotional laden' events. For example, 'When I'm annoyed with someone, I just try not to think about it'.

Regardless of whether EI and/or EL should be measured with psychometric tests or self-reported questionnaires, the need of evidence-based EL interventions to strengthen these competencies is not in dispute. For instance, the capacity to control oneself – which arguably encompasses most of the elements described in the EL definition of this review – is one of the most difficult yet rewarding abilities for a human being to achieve. Research shows that self-control is critical for goal oriented behaviour or sustaining and keeping social relationships (Guerra & Bradshaw, 2008).

Reflective regulation of emotions to promote emotional and intellectual growth

Level 1. Ability to stay open to feelings, both those that are pleasant and those that are unpleasant.	***Level 2.*** Ability to reflectively engage or detach from an emotion depending upon its judged usefulness or utility.	***Level 3.*** Ability to reflectively monitor emotion in relation to oneself and others, such as recognising how clear, typical, influential or reasonable they are.	***Level 4.*** Ability to manage emotions in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey.

Understanding and analysing emotions: employing emotional knowledge

Level 1. Ability to label emotions and recognise relations among the words and the emotions themselves, such as the relation between liking and loving.	***Level 2.*** Ability to interpret the meanings that emotions convey regarding relationships, such as that sadness often accompanies a loss.	***Level 3.*** Ability to understand complex feelings (e.g. simultaneous feelings of love and hate) or blends such as awe as a combination of fear and surprise.	***Level 4.*** Ability to recognise likely transitions among emotions, such as the transition from anger to satisfaction, or from anger to shame.

Emotional facilitation of thinking

Level 1. Emotions prioritise thinking by directing attention to important information.	***Level 2.*** Emotions are sufficiently vivid and available that they can be generated as aids to judgement, and memory concerning feelings.	***Level 3.*** Emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view.	***Level 4.*** Emotional states differentially encourage specific problem approaches, such as when happiness facilitates inductive reasoning and creativity.

Perception, appraisal and expression of emotion

Level 1. Ability to identify emotion, in one's physical states, feelings and thoughts.	***Level 2.*** Ability to identify emotions in other people, designs, art, etc., through language, sound, appearance and behaviour.	***Level 3.*** Ability to express emotions accurately and to express needs related to those feelings.	***Level 4.*** Ability to discriminate between accurate and inaccurate, or honest versus dishonest expressions of feelings.

Figure 2.1 A cognitive model of Emotional Intelligence (Frederickson & Cameron, 1999, p.5)

2.2.4 Rationale

The way emotions are regulated can facilitate or impede children's academic engagement, work ethic, commitment, pro-social behaviour and ultimately school success (Zins et al., 2013). However, most people would agree that schools are far from prioritising the teaching of EL skills even though they tend to include phrases like 'learning and enjoying together', 'growing and being happy' in their ethos. Unfortunately, the apparent lack of interest in promoting students' skills beyond academic abilities seem to start at governmental level, as there is no current national framework for EL interventions where schools can obtain evidence based resources.

Despite the significant amount of research in the area of emotions and academic performance, the relationship is still a contentious topic as evidence keeps yielding contradictory outcomes (Humphrey, Curran, Morris, Farrell, & Woods, 2007). However, many authors would agree that EL skills foster readiness to learn but not necessarily guarantee high marks in core subjects (Faupel, 2003). Consequently, it is essential to highlight some of the reasons beyond academic achievement for promoting the teaching of EL skills in schools.

1. There are several competencies that students will need when they leave school beyond academic knowledge that are arguably more important. For example, knowing how to control their temper and manage conflict, respecting the perspective of others, and being able to choose, initiate and maintain healthy relationships. In other words, preparing students for life and not just for passing exams should be one of schools' priorities. As Weare and Gray (2003, p. 56) would describe 'the learning of EL competencies is, at its

heart, about learning to be a warm, caring and empathic human being who can make worthwhile personal relationships'.

2. Extensive research has shown that in order to thrive, children and young people need to connect to positive role models and be given an opportunity to be active contributors in their community (Hughes & Curnan, 2000; Larson, 2000). Hence, failing to acquire competent EL skills results in a struggle to relate to positive role models, which can lead to a series of personal, social and academic difficulties (Guerra & Bradshaw, 2008). For example, low social acceptance in childhood has been linked to problems in adolescence and adulthood (Cowen et al. 1973).

3. The acquisition of EL skills have been found to be a protective factor against behaviour problems (Catalano et al., 2002), the onset of future mental health issues (Martins, Ramalho, & Morin, 2010) and the reduction in undesirable or (self) harmful behaviour/attitudes in at risk students. Contrary to this, longitudinal studies (as summarised by Buchanan, 2000) have shown that children with emotional and behavioural problems are prone to mental health issues in later life and have increased likelihood of school exclusion, offending, anti-social behaviour, marital breakdown, drug misuse, alcoholism and mental illness in adolescence and adulthood.

Awareness, understanding and management of emotions could arguably be considered more important building blocks of healthy childhood, adolescence and early adulthood. Therefore, it is of vital importance that Educational Psychologists help educators see the value of investing in EL interventions beyond the idea of

raising academic achievement. Additionally, promoting EL interventions would also help teachers develop a better understanding of students' negative behaviour thereby promoting more restorative ways for dealing with misconduct (DfES, 2005).

2.3 Review Question

How effective are Emotional Literacy interventions at enhancing students' emotional literacy skills in schools?

2.4 Critical Review of the Literature

A comprehensive literature search was carried out using the following databases:

- PsycINFO
- ERIC (EBSCO)
- ERIC (PROQUEST)
- ERIC (PROQUEST Dissertations and Thesis)
- Cochrane Collaboration

The search terms are outlined in Table 2.2. The results included sets in combination of terms from column 1, 2 and 3; and indicate that the studies chosen:

- Include an EL intervention delivered in schools as the main independent variable.
- Aim to measure students' EL skills as a primary or secondary outcome.
- Use a randomised control trial or a quasi-experimental design.

Table 2.2 Search terms used in databases

1	2	3
"Emotional Literacy*"	School intervention	Randomised/randomized
"Emotional Intelligence*"	School based program*	Randomised trial
"Social and emotional"	School based intervention	Randomised control trial
"Social and emotional learning"		

Unpublished articles (e.g. Doctoral thesis) were included in the search with the hope of finding relevant up to date information. Due to the nature of the review question only randomised controlled trials (RCTs) and quasi-experimental designs with pre and post measures were included. These type of designs are considered more effective in ruling out alternative explanations for any observed effect of the intervention (Dumville, Torgerson, & Hewitt, 2006; Petticrew & Roberts, 2006). Additionally, only studies conducted in English from an 'Organisation for Economic Co-operation and Development' (OECD) country, were included as their samples could be considered more similar, in terms of economic development, policies, educational systems and language.

In addition, in this review the What Works Clearinghouse website (WWC) (2015) definition of an 'intervention' was used *'[an intervention is an] educational programme, product, practice, or policy aimed at improving students' outcomes'*. For this reason, curriculums in EL have been accepted as interventions (Brackett, Rivers, Reyes, & Salovey, 2012; Domitrovich, Cortes, & Greenberg, 2007; Eodanable & Lauchlan, 2011; Nix, Bierman, Domitrovich, & Gill, 2013).

Four searches were carried out and duplicates removed. The initial search was on 11th August 2015, the second one was on 30th December 2015, the third one was on 7th September 2016 and a last search was done on 2nd March 2018. Even though four searches were carried out to ensure current studies were included in this review, only the initial two searches in 2015 contributed to the 13 studies included.

Initially every study was screened by title and then by abstract. A flow diagram of the study illustrates this process and the number of studies included (see Figure 2.2.). The inclusion and exclusion criteria are presented in Table 2.3 and the articles that were fully read before being excluded are presented in Appendix C.

The 13 studies that met the inclusion criteria for critical analysis are presented in Table 2.4.

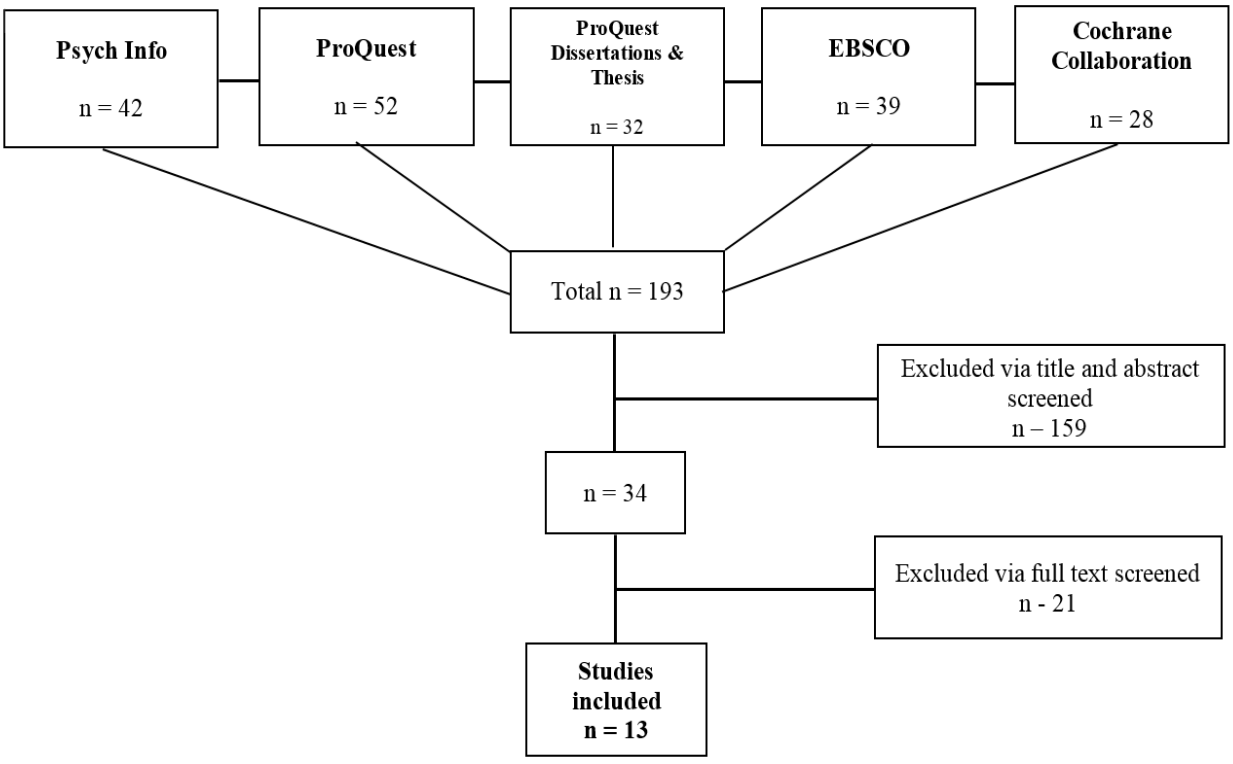

Figure 2.2. Flow diagram of the literature search

Table 2.3 Inclusion and Exclusion Criteria

	Inclusion Criteria	Exclusion Criteria	Rationale
Type of article	Any article, e.g. peer reviewed, non-peer reviewed, grey literature, pilot studies, etc.	Books, books' chapters, etc.	The availability of studies and possibility of finding relevant studies in unpublished work.
Language	Only studies in English from an OECD country e.g. UK, USA, Canada, Australia, New Zealand, etc.	Studies not written in English and/or not belonging to an OECD country.	Due to social, educational and financial similarities.
Year of publication	From 2004 to present date.	Studies carried out before 2004	Due to the incorporation of emotional health and well-being as a key component of a child's education through the Every Child Matters Framework (DfES, 2004)
Type of data	The study must include primary empirical data.	The study does not include primary empirical data e.g. Meta-	This type of data ensures first-hand information.

		analysis or Literature Review.	
Intervention	Studies that assess the implementation of an EL intervention as described in this review (or interventions that shared the same components of an EL programme i.e. SE learning).	Studies that do not assess an EL interventions or interventions that do not reflect the concept of EL described in this review.	EL is the topic of this review.
Design	The study is a RCT or a quasi-experimental design.	The study is not a RCT or a quasi-experimental design with pre and post measures.	RCT designs are more effective in isolating the effect of the intervention (Gough, 2007). They are also considered the most appropriate design for answering questions about 'effectiveness' (Petticrew & Roberts, 2006). Quasi-experimental designs can also allow for strong

			causal inferences when they have been carefully planned (Baldwin & Berkeljon, 2010).
Participants	Typically developing school students (from pre-school to the end of secondary school). The unit of analysis could be either students or teacher-student.	Clinical populations or any other population that does not include individual students' data in their unit of analysis e.g. schools, parents or teachers only.	Typically developing students tend to be a more homogeneous group making the studies more comparable. In addition, most EL interventions are universal programmes implemented to a general student body.
Implementers	The intervention needs to be implemented by school staff or in collaboration with them.	The intervention is implemented by any other person that is not part of the school personnel such as: the researcher or parents.	Research has shown that school staff can conduct successful SEL programmes and students' outcomes significantly improve when school personnel conduct the intervention (Durlak et al., 2011).
Setting	Schools	Any other setting	This is the place where most students

			are more likely to receive an EL programme.
Analysis	Quantitative	Qualitative	The instruments used for measuring the operationalised definition of EL required a quantitative analysis.
Outcomes	The study measures changes in the students' EL skills even though other outcomes could be included.	The studies measure changes in other skills without the inclusion of EL skills i.e. social skills, academic skills, behavioural skills only.	This is the topic of this review.

Table 2.4 Studies included in this Review

1. Brackett, M. a., Rivers, S. E., Reyes, M. R., & Salovey, P. (2012). Enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. Learning and Individual Differences, 22(2), 218–224. doi:10.1016/j.lindif.2010.10.002
2. Clarke, A. M., Bunting, B., & Barry, M. M. (2014). Evaluating the implementation of a school-based emotional well-being programme: a cluster randomized controlled trial of Zippy's Friends for children in disadvantaged primary schools. Health Education Research, 29(5), 786–798. doi:10.1093/her/cyu047

3. Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. Journal of Primary Prevention, 28(2), 67–91. doi:10.1007/s10935-007-0081-0

4. Eodanable, M., & Lauchlan, F. (2011). Promoting positive emotional health of children of transient armed forces families. School Psychology International, 33(1), 22–38. doi:10.1177/0143034311406819

5. Haynes, M. (2014). Emotional Intelligence & Conflict Resolution in Middle School Aged Children : The Early Effects of an Emotional Literacy Intervention (RULER), Yale School Public Health.

6. Humphrey, N., Kalambouka, A., Wigelsworth, M., & Lendrum, A. (2010). Going for Goals: An Evaluation of a Short, Social-Emotional Intervention for Primary School children. School Psychology International, 31(3), 250–270. doi:10.1177/0143034309352578

7. Humphrey, N., Kalambouka, A., Wigelsworth, M., Lendrum, A., Lennie, C., & Farrell, P. (2010). New Beginnings: evaluation of a short social–emotional intervention for primary-aged children. Educational Psychology, 30(5), 513–532. doi:10.1080/01443410.2010.483039

8. Knowler, C., & Frederickson, N. (2013). Effects of an emotional literacy intervention for students identified with bullying behaviour. Educational Psychology: An International Journal of Experimental Educational Psychology, 33(7), 862–883. doi:10.1080/01443410.2013.785052

9. Lewis, K. M., Vuchinich, S., Ji, P., DuBois, D. L., Acock, A., Bavarian, N., Flay, B. R. (2016). Effects of the Positive Action program on indicators of positive youth development among urban youth. Applied Developmental Science, 20(1), 16–28. http://doi.org/10.1080/10888691.2015.1039123

10. Nix, R. L., Bierman, K. L., Domitrovich, C. E., & Gill, S. (2013). Promoting Children's Social-Emotional Skills in Preschool Can Enhance Academic and Behavioral Functioning in Kindergarten: Findings from Head Start REDI. Early Education and Development, 24(7), 1000–1019. doi:10.1080/10409289.2013.825565

11. Qualter, P., Whiteley, H. E., Hutchinson, J. M., & Pope, D. J. (2007). Supporting the Development of Emotional Intelligence Competencies to Ease the Transition from Primary to High School. Educational Psychology in Practice, 23(1), 79–95. doi:10.1080/02667360601154584

12. Wigelsworth, M., Humphrey, N., & Lendrum, A. (2012). A national evaluation of the impact of the secondary social and emotional aspects of learning (SEAL) programme. An International Journal of Experimental Educational Psychology, 32(2), 213–238. doi:10.1080/01443410.2011.640308

13. Webster-Stratton, C., Jamila Reid, M., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: evaluation of the Incredible Years Teacher and Child Training Programs in high-risk schools. Journal of Child Psychology and Psychiatry, 49(5), 471–488. doi:10.1111/j.1469-7610.2007.01861.

2.4.1 Comparison of selected studies

All of the studies were compared on methodological features checking for the quality of the execution and its standards within the expected criteria for RCT and quasi-experimental designs (WoE A). In addition, a critical appraisal looking at the appropriateness of the research design (WoE B) and how well each study met the review question (WoE C) was carried out. The 'weight of evidence' (WoE) framework developed by Harden and Gough (2012, in Gough, Oliver, & Thomas, 2012) was used to ensure that the conclusions of this review are based on an objective, trustworthy, and appropriate analysis of the outcomes.

Table 2.6 provides a summary of the WoE framework and Table 2.7 shows the qualitative total scores of each study's WoE. It is necessary to mention that the descriptors in this Table are representations of the exact numerical values of the total of each WoE (see Appendix B). The following Table helps explain the score equivalences in numerical terms, where 'x' represents the raw score. These criteria have been applied to all WoEs.

Table 2.5 Scores Equivalences

Evidence	Scores equivalences	Average scores
Strong	High	$2 \leq x \leq 3$
Promising	Medium	$1 \leq x \leq 2$
Weak	Low	$0 \leq x \leq 1$
No/limited evidence	Zero	0

The coding protocol (group-based design) by the Task Force on Evidence-Based Interventions in School of Psychology (Kratochwill, 2003) was used to assess the quality of the execution of the studies. This guideline provided an objective framework according to the generic and accepted standards associated with RCT studies and quasi-experimental designs.

Not all of the protocol was relevant to this review as only primary or secondary outcomes related to EL were looked at. Additionally, none of the participants who took place in the studies had a clinical diagnosis therefore only the quality of measures, comparison group and statistical analyses were examined. Consequently, some of the Tables from the protocol have been removed while others have been included throughout this paper (see Appendix D for the excluded sections of the protocol and their rationale). An example of a completed coding protocol for each type of design can be found in Appendix E (RCT design) and Appendix F

(quasi-experimental design). Further information about the WoE frameworks, their rationale and the score of each study can be found in Appendix B.

Table 2.6 Framework for Weight of Evidence

Weight of Evidence A	Weight of Evidence B	Weight of Evidence C	Weight of Evidence D
Quality of execution of the study in relation to quality standards for studies of that type.	Appropriateness of the research design for addressing the Review Question.	Appropriateness of the focus of the study to the Review Question.	Considering A, B and C to rate the overall degree to which the study contributes to answering the Review Question.
(Methodological Quality)	(Methodological Relevance)	(Topic Relevance)	(Overall weight of evidence)

Table 2.7 Weight of Evidence for each study

Studies	WoE A Methodological Quality	WoE B Methodological Relevance	WoE C Topic Relevance	WoE D Overall weight of evidence
Brackett et al. (2012)	Medium	High	Medium	Medium
Clarke, Bunting & Barry (2014)	Medium	High	High	High
Domitrovich, Cortes & Greenberg (2007)	High	High	High	High
Eodanable & Lauchlan (2011)	Low	Low	High	Medium
Haynes (2014)	High	Medium	High	Medium
Humphrey, et al. (2010) a	Medium	Low	High	Medium
Humphrey et al. (2010)	Medium	High	High	High
Knowler & Frederickson (2013)	Medium	High	High	Medium
Lewis et al. (2016)	Medium	Low	Medium	Medium
Nix et al. (2013)	Medium	High	High	High
Qualter et al. (2007)	Medium	High	Medium	Medium

Webster-Stratton, Reid, & Stoolmiller (2008)	High	Medium	High	High
Wigelsworth, Humphrey & Lendrum (2012)	Medium	High	High	Medium

2.5 Integrated critical review

2.5.1 Studies' characteristics: seven studies were done in the UK and six in the USA. Two studies were longitudinal (Lewis et al., 2016; Wigelsworth et al., 2012) and two other were pilot studies (Brackett et al., 2012; Clarke, Bunting, & Barry, 2014). Appendix A provides details of the following relevant information: design and aim, sample, control group, brief description of the intervention, measures, follow up, and relevant findings.

2.5.2 Research Design: six studies used a RCT design and seven were quasi-experimental. A possible explanation as to why most studies in EL have used a quasi-experimental design is due to the obvious ethical constrictions that doing a completely randomised study could present in a school setting. Since 2004 with the 'Every child matters' initiative, the UK government encouraged schools to promote a 'holistic education' that included the teaching and development of social emotional skills in children (DfES, 2003). For this reason, and as most EL and SEL interventions tend to be universal programmes, the randomisation process of allowing only some children to access the intervention could seem unethical. This could also be a reason for most studies having nested designs where schools or classrooms were the main unit of analysis. Nonetheless, all the studies collected data

and performed the analysis at the student level which could have brought potential statistical errors such as the inflation of p-values (Dorman, 2008).

A strength in this section is that the majority of studies clearly described the process of randomisation they used. Moreover, although most of the studies were either 'early stage programmes' or pilot studies, this did not seem to lessen their quality in answering the review question. There was no study with a score lower than 'medium' for the total of WoE D.

2.5.3 Sample: the participants ranged from pre-school to secondary school age. As mentioned above, most EL and SEL interventions tend to be universal programmes delivered by all teachers to students across the school years (Institute of Medicine, 1994). For this reason, this review wanted to explore its effects in a range of ages.

A common feature across the studies was a sufficiently large *sample size* (M = 817) which surpasses the average sample reported for the intervention group (M = 543, SD = 1,119.83) by the latest meta-analysis in this field (Sklad et al., 2012). Three studies had an underpowered sample size and for this reason received a lower WoE B (Eodanable & Lauchlan, 2011; Knowler & Frederickson, 2013b; Lewis et al., 2016). Although a sufficiently large sample is desirable in RCT designs as it allows the detection of any significant changes between the groups' means (Cohen, 1992), it could also be a deceiving factor as even small changes could be deemed significant in big samples (Field, 2013).

All of the studies but one (Clarke et al., 2014) came from either the USA or UK, as a result it is important to keep in mind cultural differences and be cautious when attempting to generalise their findings outside these two countries. However, it is fair to say that all the studies from the USA had attempted to make a fair

representation of the ethnic diversity that some states have. For example, all the studies had participants from African American, Hispanic and Asian background. Furthermore, all the studies in this review had a balance distribution of boys and girls, and few of them had concentrated on exploring disadvantage populations only (Clarke et al., 2014; Domitrovich et al., 2007; Nix et al., 2013).

More than half of the studies did not report any information on ***attrition*** therefore obtained a lower score in the WoE B (Brackett et al., 2012; Haynes, 2014; Humphrey et al., 2010; Humphrey et al., 2010 (a); Lewis et al., 2016; Nix et al., 2013; Webster-Stratton et al., 2008). However, for those who reported it, the *attrition rate* was low (20% or less) (Kratochwill, 2003).

A low attrition is regarded as an important factor for RCT designs as the loss of participants could have an important impact on the results. For example, when the groups have been randomly assigned, attrition could increase the risk of statistically imbalance between the groups (Dumville et al., 2006). Consequently, it is necessary to consider the possible reasons for some participants dropping out or staying, as well as any biases this may produce at the moment of understanding the findings.

Most of the authors did not report any significant differences between the participants who stayed and those who left at post-test or follow up. For example, Domitrovich et al. (2007) found 'very few differences' (p.78) between the groups. They found that those who attrited had higher functioning and therefore were less likely to be classified as having a special need (e.g. speech problems, language delay). They were also rated by their teachers as less likely to have behavioural problems ($t = 2.09$, $p < .04$), and they tended to score higher in an inhibitory control task compared with those participants who remained in the intervention ($t = -2.50$, p

< .02). In other words, in this specific case the significant findings they obtained in the areas of emotion receptive language, identification of feelings and reduction of anger attribution bias, could have been tainted by the extra scope for improvement that the participants who stayed already had, as they tended to score lower on the different measures.

2.5.4 Control Group: there was a mix of 'no intervention' and 'wait list' control groups in the RCT studies. Whilst with the quasi-experimental design studies, those that had any type of control group were given a higher score in the WoE B as the more similar a quasi-experimental design is to a RCT, the higher the quality of the design (Harris, Lautenbach, & Perencevich, 2005). This was the case of the Humphrey et al. (2010a) study.

2.5.5 Group equivalence: all the studies showed some degree of equivalence between the control and intervention groups. In general, the authors had tried to balance the groups by controlling: gender, ethnicity, demographics, SES and in some cases academic performance.

2.5.6 Measures: there was a variety of measures used. This could be due to the range of outcomes explored and the different ages included in the studies. Nevertheless, every study used at least one measure that included all or some of the elements of EL explored in this review. In addition, all the studies except two used at least one standardised test with medium to high reliability, which ensures the quality of the results. Two studies did not report these values therefore obtained a lower score in the WoE C (Lewis et al., 2016; Qualter, Whiteley, Hutchinson, & Pope, 2007).

Among the measures used were standardised tests, teachers and parents' questionnaires, parents' interviews and behavioural observations. In some cases,

studies had used several measures to triangulate and assure the validity of their data. For this reason, they scored higher in the 'multi-source' and 'multi-methods' sections of WoE C (Domitrovich et al., 2007; Eodanable & Lauchlan, 2011; Nix et al., 2013; Webster-Stratton et al., 2008).

2.5.7 Follow up: in order to check the sustainability of any significant findings, five studies carried out a follow up assessment thus obtained a higher score on the WoE B (Clarke et al., 2014; Humphrey et al., 2010; Nix et al., 2013; Webster-Stratton et al., 2008). In general, the timeframe between the post-test and the follow up ranged from seven weeks to one year.

2.5.8 Application of the Intervention: Given the topic of the review and the implied homogeneity of the settings (i.e. schools), it was not considered necessary to produce a summary Table for these elements.

2.5.9 Treatment duration: On average the interventions evaluated lasted one academic year and had a mean intensity of approximately 45 minutes per week, which is in line with other review findings (Sklad et al., 2012). Most of the schools had integrated the intervention into their SEL curriculum, or in the case of the UK, into their Personal, Social, Health education (PSHE). For example, some schools had implemented the intervention during the weekly 'circle time' session whilst carrying out other supplementary activities during the rest of the week (Domitrovich et al., 2007). These activities had the objective of giving students an opportunity to put into practice the theory learnt in the classroom.

2.5.10 Components: four of the interventions were 'curriculums' which were designed to support the social and emotional development of the students across a range of subjects (Brackett et al., 2012; Domitrovich et al., 2007; Eodanable &

Lauchlan, 2011; Nix et al., 2013) and/or at specific stages. For instance, the CCK curriculum (Eodanable & Lauchlan, 2011) aimed at strengthening students' EL skills but also preparing them for transition into secondary school.

Only one of the studies (Brackett et al., 2012) clearly presented the different elements of the intervention. For example, Brackett et al. (2012) presented a Table with the five main components and six steps that enabled the success of their RULER feeling words curriculum. However, the New Beginnings and Going for Goals small group interventions which are part of the SEAL curriculum for primary school (DfES, 2005) (Table 2.9) also provided feasible steps that schools can easily follow.

Table 2.8 RULER feeling words curriculum

Table 1
Overview of six steps in the RULER feeling words curriculum.

Description	Example: Elated	Significance	RULER skills practiced during step (a sample)
Step 1: Introduction of feeling word. Learning emotion-related vocabulary words by sharing personal experiences related to the meaning of the word.	Teachers and students talk about a time when they felt very excited and happy. Teacher formally introduces the word "elated" and its definition to students.	Students enhance their understanding and recall of words.	*Recognize* emotions by remembering and describing an emotional experience and listening to peers and teachers describe theirs. *Understand* the causes and consequences of different emotions. *Label* emotional experiences using newly introduced vocabulary and its synonyms.
Step 2: Designs and personified explanations. Interpreting and explaining abstract designs in terms of their symbolic representations of feeling words.	Students explain how this design looks like the word "elated." 	Students use divergent thinking and visualize the elements and actions that represent meanings of feeling words.	*Recognize* emotions by identifying aspects of abstract designs that may represent their meaning. *Express* emotions in nonverbal ways through designs.
Step 3: Academic and real world association. Relating feeling words to current events and academic topics.	Students are asked to link the word "elated" to a story about Lewis and Clark and to describe in a couple of sentences the experience of one of the characters who felt elated.	Students evaluate how people of different societies and time periods experience, express, and manage emotions.	*Understand* emotions by analyzing the types of events and situations that cause and result from various emotions. *Express* emotions by discussing how emotions are conveyed in various contexts by diverse groups of people. *Regulate* emotions by considering the strategies that different types of people and characters use to manage emotions.

Step 4: Family association. Discussing feeling words with family members at home.	Students ask parents or caregivers about a time when they felt elated.	Parents are involved in students' academic work; Students have increased understanding of their parents' thoughts, feelings, actions, and pasts.	*Understand* emotions by learning about the triggers and consequences of the emotional experiences of adults. *Label* emotions and *Express* emotional experiences using feeling words to communicate with adults. *Regulate* emotion by discovering different strategies adults use to handle their emotions.
Step 5: Classroom discussions. Discussing topics from Steps 3 and 4.	When a student says the team was elated after winning the World Series, the teacher asks students how they feel when they accomplish something significant.	Students expand each other's knowledge, are exposed to others' viewpoints, and learn strategies to enhance, maintain, or curtail emotions.	*Express* emotions by discussing the appropriate ways to show how they are feeling in various situations. *Regulate* emotions by creating, evaluating, and adopting strategies for managing emotions.
Step 6: Creative writing. Writing creative essays using feeling words.	Students are asked to tell a story with a beginning, middle, and end about a person who went from feeling "forlorn" to "elated."	Students incorporate their own ideas and personal experiences into writing and think critically about how emotions progress and transform life experiences.	*Recognize* emotions by describing in writing how people feel, look, think, and act as they experience emotions. *Understand* emotions by thinking about what causes and results from emotions as they develop and change. *Label* emotions using various feeling words in their writing.

Overall, five studies provided a brief description of the main components of their intervention (Brackett et al., 2012; Domitrovich et al., 2007; Haynes, 2014; Nix et al., 2013; Qualter et al., 2007). In general, they agreed on the following elements as key characteristics of an EL programme:

- Learning a new 'feeling' and being able to label it (i.e. emotion vocabulary).
- Understanding its meaning.
- Being able to talk about the new feeling, identify and understand its triggers such as why, when and how it may appear in oneself and in others (i.e. self and social awareness).
- Learning how to manage that feeling and potential interpersonal conflict (i.e. self-regulation).
- And in some cases, having the opportunity to practise the new skill by using meaningful real-life examples (i.e. becoming an effective problem solver and developing empathy).

Most of these interventions also outlined the need of using a school activity (e.g. writing, reading, drawing, role-playing etc.) to make the learning real and increase the possibility of internalising and generalising the new skill.

Another important factor was the **implementers' ability** to deliver the intervention, however, none of the studies provided clear information on this matter. Only Webster-Stratton et al. (2008) acknowledged the importance of the teacher's skills in implementing the intervention and managing classroom disruption to help students develop EL knowledge.

2.5.11 Treatment Fidelity: the majority of the studies had carried out some form of evaluation while the intervention was taking place. In addition, most studies also provided either formal or informal training, as well as written information to facilitate the intervention's implementation. For instance, every session of the New Beginnings and Going for Goals interventions follow the well-known format for small group activities from the SEAL primary school (DfES, 2005) (Table 2.9).

The study conducted by Webster-Stratton et al. (2008) was particularly strong on this point, as some of the researchers implemented the intervention alongside teachers. This strategy had the intention to model behaviour as well as ensuring the fidelity of the treatment.

Table 2.9: New Beginnings session's format (Humphrey et al., 2010, p. 521)

1. Welcome and check-in: children are welcomed and given the opportunity to say or show how they are feeling.

2. Warm-up activities: typically short games designed to increase group cohesion and practice key skills such as turn-taking and listening.

3. Reminder of group aims and behavioural expectations: these are set out in the first week and reinforced at each subsequent session.

4. Review of previous week: the last session is discussed, and children are encouraged to talk about things that have gone well for themselves and opportunities they have had to apply learning from previous sessions.

5. Plan for current session: specific learning outcomes (in the form of 'I can …' statements) that are the focus of the session are presented.

6. Core activity: children participate in a core activity relating to the SEAL theme being addressed (e.g. New Beginnings) and the learning outcomes for the session. The SEAL small group work guidance provides a range of 'off the shelf' core activities, but group facilitators are also encouraged to develop their own.

7. Review and reflection: the group reviews what has been achieved in the session and considers how they might apply the learnings over the coming week.

8. Plans for coming week: the group facilitator will suggest a task that children can undertake in the coming week.

9. Relaxation: children are given the opportunity to relax through guided exercise.

2.5.12 Receptivity and Acceptance: this is an area of clear weakness among the studies. Only one study out of 13 (Eodanable & Lauchlan, 2011) reported teachers' and pupils' evaluations of the intervention effectiveness and its social acceptance. Overall, the pupils rated it as interesting and believed that its material had, to a certain degree, contributed to the improvement in understanding their emotions and feeling more prepared for transition into secondary school. Additionally, comments from the focus groups indicated enjoyment of collaborative activities. However, this particular study did not find any significant results in the use of the intervention.

2.6 Findings: Outcomes and Effect sizes (ES)

A number of factors made comparison between the studies challenging. For example, most authors agreed on the basic elements that constitute EL skills such as recognising, understanding, handling and appropriately expressing emotions in oneself and in others (Sharp, 2001). However, as mentioned in the introduction section, there is still a great deal of disagreement on how these skills should be measured. This is reflected by the range of instruments and measures used by the different studies, which demonstrates the lack of a common language in the field. Consequently, and despite the closeness of the terms, it was difficult to entirely differentiate EL skills from other outcomes such as social skills.

Moreover, the studies included in this review used a variety of statistical analysis which yielded different ES. A comparison Table with Cohen's d (1992) as the main descriptor has been created to facilitate comparison among studies (Table 2.10). Some of the ES reported in this review have been manually obtained using Morris' formula (2008) (Standard Mean Difference: SMD) by subtracting the intervention and control groups' (pre and post-test) means, and dividing it by the pooled standard deviation (Hedge's g) (see Figure 2.3 for the formula). Table 2.11 shows a summary of the outcome measures, ES and WoE D.

Morris' SMD (2008):

$treat\Delta = mean_{treat.post} - mean_{treat.pre}$

$control\Delta = mean_{control.post} - mean_{control.pre}$

$$\textbf{SMD} = \frac{treat\Delta - control\Delta}{\text{pooled } SD_{pre}}$$

Hedge's pooled SD:

$$\sqrt{\frac{(N_A - 1) \times SD_A^2 \quad + (N_B - 1) \times SD_B^2}{N_A + N_B - 2}}$$

Figure 2.3 Morris' (2008) and Hegde's g Formula for ES

Table 2.10. Interpretation of Effect Sizes (Cohen, 1988)

Type of Effect size	Small	Medium	Large
Partial Eta square (Partial $\eta^{2)}$	.01	.06	.14
Eta square (η^2)	.02	.13	.26
Pearson r	.1	.3	.5
Cohen's d	.2	.5	.8

Table 2.11 Summary of Effect Sizes

Study	*Outcome Measure	Effect Size	Descriptor (Cohen's d)	Overall Quality	WoE D
Brackett et al. (2012)	Social and Emotional competence (time x condition):			Small	Medium
	Adaptability	Partial η^2 = .05	Small		
	School Problems	Partial η^2 = .04	Small		
Clarke, Bunting & Barry (2014)	Emotional Literacy Checklist (time x condition):				High
	Post-test:			*Post-test:*	
	Self-awareness	***SMD = .38	Small	Small	
	Self-regulation	SMD = .26	Small		
	Motivation	SMD = .44	Small		
	Social skills	SMD = .18	Small		
	Follow up:			*Follow*	
	Self-awareness	SMD = .23	Small	*up*	
	Self-regulation	SMD = -.02	Small		
	Motivation	SMD = .27	Small	Small	
	Social skills	SMD = -.09	Small		
Domitrovich, Cortes & Greenberg (2007)	Emotion Knowledge	d = .36	Small	Small	High
	Emotion Expression	d = .37	Small		
	Anger bias	d = .40	Small		
	Children's social and emotional competence	d = .36	Small		

Eodanable & Lauchlan (2011)	Emotional Literacy Checklist (time):	No significant differences were found before and after the intervention		Zero	Medium
Haynes (2014)	Mayer-Salovey-Caruso Emotional Intelligence Test (4^{th} subscale) (MSCEIT)	No significant differences were found before and after the intervention		Zero	Medium
Humphrey, et al. (2010) a	ELAI Child report (extra support group and time)	d = .05	Small	Small	Medium
	ELAI Teacher report (extra support group and time) (SEAL primary school)	d = .29	Small		
Humphrey et al. (2010)	ELAI Child report (extra support participants only) (SEAL primary school)	Partial η^2 = .02	Small	Small	High
Knowler & Frederickson (2013)	Trait Emotional Intelligence Questionnaire-Child Form (TEIQue-CF)	No intervention group x time effect was found in the outcomes of		Zero	Medium

		interested for this review.			
[†]Lewis et al. (2016)	Social-Emotional and Character Development Scale (SECDS)			Small	Medium
	Self-concept	[2]Cox's d = .5	Medium		
	Children's Empathic Attitudes Questionnaire				
	Empathy	Cox's d = .26	Small		
	The Social skills Problem Solving Measure				
	Aggressive problem solving	Cox's d = -.76	Medium		
	Competent problem solving	Cox's d = .05	Small		
Nix et al. (2013)	Assessment of Children's Emotions Skills and Emotion Recognition Questionnaire			Small	High
	Post-test	[**]β = .36	Medium		
	Follow up	β = .20 (and reading achievement)	Small		
			Small		

		$\beta = .11$ (learning achievement)			
Qualter et al. (2007)	The BarOn Emotional Quotient Inventory: Youth Version	SMD (within low EI group only) = 2.18	Large	Large	Medium
Webster-Stratton, Reid, & Stoolmiller (2008)	School readiness and conduct problems-COCA-R			Large	High
	Post-test	[1]d = .82	Large		
	Follow-up	[1]d = -2.87	Large		
	Wally Problem Solving and Feelings Test (only a subgroup – time x condition)			Medium	
	Positive strategies	$\eta^2 = .041$	Small		
	Identify positive feelings	$\eta^2 = .14$	Medium		
Wigelsworth, Humphrey & Lendrum (2012)	Emotional Literacy Assessment and Intervention battery	Non-significant effects of the SEAL secondary school programme on pupils' SE skills, mental health and		Zero	Medium

	pro-social was found.

[*] Only those outcomes that were found significant are shown in this Table.
[**] As Beta is a standardised effect size, it has been considered comparable to Cohen's d.
[***] The Standard Mean Difference (SMD) was calculated by the author.
[1] The author did not specify these EF as Cohen's d, however throughout the paper it was implied this is the case.
[2] Cox's d and Cohen's d have comparable statistics (Sánchez-Meca, Marín-Martínez, & Chacón-Moscoso, 2003).
[†] These effect sizes need to be taken with caution as the authors did not report the p-values for any of these ES.

As seen in Table 2.11, five studies obtained a 'high' score in the WoE D and eight obtained 'medium' (to see the raw scores please go to Appendix B). Overall, it could be said that the studies assessed in this review are of 'good quality' to answer the review question. Hence, the findings are a good representation of how effective EL interventions are at enhancing students' EL skills.

Despite the heterogeneity in measures and ES presented, a staggering agreement appeared in terms of ESs. All the ES but one (Qualter et al., 2007) are small and in four cases non-existent (Eodanable & Lauchlan, 2011; Haynes, 2014; Knowler & Frederickson, 2013a; Wigelsworth et al., 2012). In other words, 31% of the studies did not find EL interventions useful in enhancing students' EL skills. 54% of the studies showed that EL interventions are only marginally effective in developing students' EL skills and 8% demonstrated that some EL interventions could be effective.

These findings seem to contradict other meta-analysis outcomes (Durlak et al., 2011; Payton et al., 2008; Sklad et al., 2012) and the Education Endowment Foundation's (EEF) statements (Retrieved September, 2015) on SEL interventions. They affirm that this type of interventions 'almost always improve emotional or attitudinal outcomes'. However, they also acknowledge that the majority of studies

they have looked at come from disadvantaged, low attainment or 'high risk' pupils, neither of which was of particular interest in this review. Moreover, both the meta-analysis and the EEF looked at interventions that included other outcome measures such as social skills for which there is clear evidence of its effectiveness (Sklad et al., 2012). This raises the question whether those studies were in fact assessing EL skills or mainly other competencies.

It is important to mention that there was a disparity between the ES reported by Clarke et al. (2014) on all the sub-scales for the follow-up phase and this review's findings. Special attention needs to be given to the self-regulation (SMD = -.02) and social skills (SMD = -.09) subscales as this review found them not only different but negative. This contradicts the authors' confirmation on the sustainability of the findings. Moreover, it questions the intervention's effectiveness.

A curious finding was reported by Qualter et al. (2007). They found an unexpected large ES (SMD = 2.18) only for those students who originally scored low in the EI measure at baseline. This suggests that the intervention had a particularly good effect on these participants which is similar to what Humphrey et al. (2010 a) also noticed, even though in their case the ES was marginal (d = .05). However, Qualter et al. (2007) also found that students who obtained high scores at baseline experienced a significant reduction on their EI level. Nevertheless, these scores were still above the average mean.

Another interesting outcome was reported by Lewis et al. (2016). Unlike the rest of the studies where EL interventions had enhanced students' EL skills, Lewis et al. (2016) found that students' self-control, empathy skills and competent social problem solving declined *less* for those participants who were in the intervention

group compared to the control group throughout primary school years. They also found that aggressive problem solving significantly reduced and students were opting for more socially accepted ways of dealing with conflict.

In addition, it is essential to highlight the disparity of findings between the primary and secondary version of the SEAL initiative (Humphrey et al., 2010a; Humphrey et al., 2010; Wigelsworth et al., 2012). Despite the small effect sizes that the primary SEAL yielded, the outcomes were found significant contrary to the secondary initiative where no significant results were found in any of its outcome measures.

But how can these modest ES across studies be understood? According to Cohen (1992), a small ES is less of what is considered appropriate in the social sciences, as medium ES are acceptable and somehow expected in this field. As a way of illustration, Cohen (1992) describes medium ES as being visible to the 'naked eye of a careful observer' (p.156) therefore small ES are practically invisible in terms of changes in behaviour, attitude and even knowledge. In other words, small effect sizes are not sufficient to make the changes in the students' behaviour/attitude noticeable enough for parents or teachers to report them. This could explain why in the case of Humphrey et al. (2010 a) the parents did not report any significant changes in their children's outcomes. In statistical terms, a medium ES represents an increase of half a standard deviation (SD) in a standardised test (Cohen, 1992) therefore a small ES would be less than half of a SD, making it difficult for standardised tests to pick up the change as a significant difference. However, this does not mean that at individual level all changes to behaviour are not meaningful, as they have the potential to become important changes in the right direction. In other words, it would be unfair to only look at the statistical value of ES without considering the potential practical

value of interventions as stated by Durlak (2009) ‘an effect of lower magnitude on one outcome can be more important than an effect of higher magnitude on another outcome’ (p. 918).

The modest ES found in this review could also be explained in terms of Partial eta squared (Partial η^2) as this was another common ES used in the studies. Partial eta squared can be understood as the proportion of variance that a variable explains when excluding other variables in the analysis (Field, 2013). For example, in the Brackett et al. (2012) study it could be said that the SEL intervention produced a significant increase of 5% in adaptability and significant reduction of 4% in school problems when other variables were not taking into account. In others words, the contribution of the SEL intervention could be deemed extremely limited, nevertheless significant.

2.7 Conclusion

Despite the extensive research on social and emotional learning interventions carried out in recent years (Durlak et al., 2011; Payton et al., 2008; Sklad et al., 2012), this review is the first of its kind to attempt to evaluate the efficacy of EL interventions and the impact they have on enhancing students’ EL skills only. While in practical terms teaching exclusively EL skills without linking them to other apparent skills (such as social or relationship skills) can be deemed short-sighted; it is nevertheless necessary to explore whether the understanding and handling of emotions could be considered a separate construct or whether it should be integrated as an integral part of social skills (Crick & Dodge, 1994).

This review has adhered to strict and narrow selection criteria to avoid what the EEF (2015) has described for SEL interventions as “…the quality of the

underlying studies varies considerably and there are few well-controlled trials, particularly at scale. Overall the evidence is extensive, but not very consistent or very high quality" (p. 1)

In consequence, this review aimed to evaluate 13 school based EL interventions delivered by school staff to help enhancing students' EL skills. The studies in general were found to be of good quality in answering the review question. All the studies but two (Qualter et al., 2007; Webster-Stratton et al., 2008) yielded small ES and in four cases there were no significant findings (Eodanable & Lauchlan, 2011; Haynes, 2014; Knowler & Frederickson, 2013a; Wigelsworth et al., 2012). Hence, it could be said that despite the various significant findings observed in other areas, EL interventions have very limited impact of enhancing students' EL skills.

It is difficult to fully compare this review's findings with other research, as all other reviews have explored social and emotional skills alongside other outcomes such as: behaviour, academic skills, emotional distress, etc. However, it is possible to conclude that these findings drastically contrast the medium ES found by other authors. For example, Durlak et al. (2011) found a weighted ES for social and emotional skills of .57 and Payton et al. (2008) of .60. Moreover, Sklad et al. (2012) concluded that social, emotional and behavioural interventions 'do indeed first and foremost enhance social and emotional competencies' (p. 893).

So, why has this review found such small ES? Firstly, it could be due to the strict selection of studies used in this review, as other reviews and meta-analysis have not limited their selection criteria to statistically strong designs such as RCTs, giving scope to less stringent results. Secondly, perhaps the measures employed in those studies do not fully resemble the construct of EL used in this review but instead

measure other skills such as social skills, behaviour, mental health, etc. Lastly and in agreement to what Mayer, Caruso and Salovey (2016) proposed with their ability model of EI; EL skills could simply develop at a different rate compared to other skills, such as social or personal skills. Therefore they would require interventions that are consistently implemented across a number of years to yield results that can eventually be captured by standardised assessments. An example of this could be the longitudinal study done by Lewis et al. (2016). Even though, they did not find an increase in EL skills as a product of the intervention, they found that EL skills significantly *decreased less.* In other words, EL interventions could be considered as an important factor to wane the decline in EL skills towards the end of primary school and transition into secondary school.

However, this analysis would be incomplete if only the efficacy (do EL interventions work?) is explored and not the effectiveness as well (do they help students?). Although this was not the focus of this review (as there is already plenty of evidence on this) it is worth mentioning some other outcomes that concur with previous meta-analysis (Durlak et al., 2011; Payton et al., 2008; Sklad et al., 2012). Nevertheless, these findings need to be taken with caution as they have not been appraised with the same strict standards that EL skills have been in this review. Besides, some of these results could not be generalised, as the samples are limited to either disadvantaged or pre-school children.

Knowler and Frederickson (2013) did not find any significant results for their targeted EL intervention. However, they found a significant reduction in peer-rated bullying behaviour for those students whose EL baseline levels were low ($F (1, 20) = 5.18$, $p = .03$, $\eta p^2 = .21$). These findings agree with those of Qualter et al. (2007), Humphrey et al. (2010a) and Humphrey et al. (2010) in that only those students who

initially scored low in EL assessments showed significant even though statistical marginal improvement (Appendix A). This could mean that EL interventions start filling in the gaps for those students with poor EL skills.

Another interesting finding is the significant improvement in children's academic and social skills. For instance, some of the studies found that students' academic performance and literacy skills improved; and issues in transition from primary to secondary school reduced significantly in Year 7 students (Brackett et al., 2012; Nix et al., 2013). These findings add to the already existing relation between SEL interventions and improvement in a range of outcomes such as:

- Academic achievement (weighted mean ES of .32 on students' academic attainment i.e. maths, reading and English) (EEF, 2015).
- Increase in pro-social behaviour and reduction in problem behaviour (Durlak et al., 2011) which was also found by Webster-Stratton, Reid and Stoolmiller (2008).
- Decline in conduct problems, emotional distress and improved attitude (Payton et al., 2008).

Moreover, according to the EEF (2015) El and SEL interventions provide around four months progress in students learning which can be reflected as a 11 percentile gain in academic performance (Durlak et al., 2011).

In conclusion, according to the findings of this review, EL interventions have a marginal impact on enhancing students' EL skills only. These findings pose many questions such as:

- Can EL skills be seen as a separate concept from other constructs such as social skills and mental wellbeing?

- Are EL skills a ‘within child’ process or do they need the active participation from other members of the society such as parents, teachers and peers to develop?
- Do EL skills require more time to develop therefore making it difficult to capture its change with short-term interventions?
- Are EL skills simply a more challenging area that requires academics to find more common ground to investigate them more extensively?

Despite the findings of this review, there is some evidence that children who initially score low in EL assessments will start showing some improvement in the desired direction (Qualter et al., 2007; Humphrey, et al., 2010a; Humphrey, et al., 2010). This could mean that EL skills develop earlier in life or they simply need longer, more constant interventions to produce observable changes. Additionally, the implementation of EL interventions seem to foster other areas of students’ development which makes them worth investing in (Clarke et al., 2015).

In this review, three interventions provided a clear and easy to follow format that could be implemented in primary schools. Lastly, the New Beginnings and Going for Goals interventions which are part of the SEAL curriculum for primary school (DfES, 2006) (Table 2.9) and RULER feeling words (Brackett et al., 2012) (Table 2.8) can be a good start for teachers who look at strengthening students’ abilities beyond academic skills.

2.8 Recommendations

Although most studies evaluated in this review obtained a medium score in their WoE D (overall contribution to answering the review question), improvement in the quality of the designs and the use of appropriate statistical methods would

strengthen the evidence towards the efficacy and effectiveness of the interventions. This could be done by improving some methodological principles, for example:

Firstly, all studies but two (Eodanable & Lauchlan, 2011; Knowler & Frederickson, 2013a) had a two or at times three level structure. For example, even though all the studies collected individual data and used students as the unit of analysis, some studies had nested students in classes and classes in schools, as they had pre-selected schools/classes to then allocate them to either the control or intervention groups. However, ignoring grouping hierarchies can lead to statistical and interpretational errors such as Type I error (Tabachnick & Fidell, 2007). As Hedges notes:

> A common mistake in analysis of cluster-randomised trials is made when the data are analysed as if the data were a simple random sample and assignment was carried out at the level of individuals. This typically leads to an overstatement of the precision of results and consequently to anticonservative conclusions about precision and statistical significance of treatment effects (Hedges, 2007, p. 152).

The optimal approach to deal with potential issues with nesting and clustering of data is the use of Multilevel Modelling approaches. However, only four studies did so (Haynes, 2014; Lewis et al., 2016; Webster-Stratton et al., 2008; Wigelsworth et al., 2012). For these studies, the recommendation is to be aware of potential clustering effects when observations are being made within clusters instead of between clusters. Observation within clusters (which could be the case of observing classes within the same school) are more likely to be similar and similarity can

introduce non-independence, which leads to the underestimation of standard errors of regression coefficients, which in turn leads to the inflation of p-values (Type I error) (Dorman, 2008).

Secondly, although at first glance most of the interventions seem feasible to implement, none of the studies gave information on training, support resources and cost. Consequently, future research needs to evaluate whether the interventions are cost effective and can be incorporated and adapted to the busyness of schools' routine.

Thirdly, research suggests that implementation fidelity is a crucial mediator of programme impact (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Developing an evidence-based intervention is essential but in itself not enough for success in settings such as schools which are busy and highly variable. Hence, future studies need to evaluate how fidelity and quality of the execution affect the final outcome. According to Weare and Gray (2003), most effective EL programmes use guidelines or manuals to guide the consistency of delivery. This could shed more light on whether small ES are a product of the intervention itself, or a reflection of inconsistency in its delivery.

Another key aspect is the need for triangulating results, especially when abstract and difficult to observe constructs such as EL skills are explored. The lack of multi-sources and multi-methods procedures across the studies could have heightened the small ES found in this review.

Lastly, testing 'enjoyment' and social validity as well as efficacy will help improve the development of EL interventions. This could be easily achieved by using either qualitative (e.g. a small interview) or quantitative (e.g. a 1-10 scale) methods and capturing participants' voice.

The findings of these review can also be seen as an opportunity to Educational Psychologists to advise schools and parents on how to improve the effectiveness and impact of EL interventions. Consequently, in addition to methodological improvements, practical elements could enhance the impact of the intervention. Research has found that the use of a multi-component approach such as S.A.F.E will increase the effectiveness of EL interventions (Bond & Hauf, 2004; Durlak, 1997; Gresham, 1995). Interventions that use a ***S*equenced** step-by-step training approach, ***A*ctive** forms of learning, ***F*ocus** sufficient time on skills development, and have ***E*xplicit** learning goals are more likely to succeed.

Literature also suggests that these elements need to be in combination with one another rather than independent factors. For example, new ways of controlling a feeling should be broken down into smaller steps to give the student the opportunity to master the sequence. These steps should include clarifying what the problem is, identifying a range of alternative solutions, examining their pros and cons and their long and short term implications as well as reflecting on the outcome (Elias & Tobias, 1996).

An active activity for the student to practice the newly gained knowledge is necessary for skill acquisition (Salas & Cannon-Bowers, 2001) such as role-playing or in regular class conversations. There is a general agreement that whole class discussions give pupils a chance to practise many key competences, such as listening, being assertive, empathising, and resolving conflicts, and this method can easily be replicated in every day experiences therefore aiding its generalisability (Elias et al, 1997; Lantieri and Patti, 1996; Wetton and Cansell, 1993)

Also, sufficient time and attention should be given for the skill to develop and become automatic. In other words, the student needs to focus on the

requirements for that specific skill and dedicate enough time to integrate it as part of their natural reaction. This should include ‘a regular and predictable work routine to develop specific skills across the curriculum, and reinforce these skills by pupils’ real life experience across the whole school’ (Weare & Gray, 2003, p.68).

Finally, clear and specific learning objectives need to be negotiated with the student, as it is essential that they are aware of what exactly they are expected to learn (explicit) and how this can be achieved (Durlak et al., 2011).

Another important factor to consider with EL interventions is the possibility that EL skills take longer to develop contrary to other skills such as academic skills. Therefore, the implementation of this type of interventions need to be embedded over a number of years from primary to secondary school instead of as a ‘one off’ programme. More longitudinal studies need to assess the effectiveness of interventions implemented across several years. Finally, activities that include parents and siblings should be considered as an element of the intervention. This could encourage parents to spend quality time with their children and use the home as another place to reinforce the skills taught at school. Programmes which actively involve parents and the community are more likely to have a positive impact on behaviour, as parental involvement is well recognised as being a key element for a child’s success not only in school but also in life (Desforges & Abouchaar, 2003).

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CHAPTER 3

Empirical Paper

Restorative Conversation, a different way of dealing with peer conflict

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Abstract

This single case experimental study with multiple baselines explored the impact that Restorative Conversation (RC) had in reducing peer conflict incidents and promoting pro-social behaviour in five primary school students. Restorative Conversation is a simplified version of the restorative conference from Restorative Justice (RJ). It is theoretically grounded in the values and principles of RJ of encouraging students to reflect on their behaviour, take responsibility for their acts, amend the harm and restore the relationship that has been damaged. Three months of data were obtained from direct observations of the students' behaviour. Analysis involved visual analysis, PEM and Tau-U effect sizes. Overall, the intervention showed a decreasing trend in peer conflict incidents in four of the five participants, however, only two of these results were found to be statistically significant. Findings in relation to pro-social behaviour appeared to be contradictory and two significant but negative effects were found. Fidelity of implementation was maintained, suggesting the intervention is appropriate for delivery in school settings. Students' and teachers' feedback supported the social validity of the programme. Recommendations for future research and discussion of the limitations are considered.

3.2 Introduction

3.2.1 Restorative Justice in schools: Theoretical basis

Restorative Justice (RJ) in schools is best understood as an innovative behavioural management approach for fostering caring, inclusive and fair school communities. It is based on the premise that most people care about others and that human beings are relational and thrive in environments of social integration instead of control and fear (Kelly & Thorsborne, 2014). RJ views misbehaviour as a breach of people's relationships rather than rules or policies and therefore puts repairing relationships above blame and punishment (Hopkins, 2003).

RJ has its origins in the criminal justice system but in education it is considered a part of Restorative Approaches. It is relatively new in schools and is gaining popularity both nationally and internationally in different forms including: Circles, Restorative Practices, Restorative Processes and Restorative Discipline (Armour, 2013; Hopkins, 2007a, 2007b; Kane et al., 2006, Thompson & Smith, 2011).

Some schools regard RJ as an alternative to punitive approaches such as 'zero tolerance' (Teasley, 2014) . These approaches have raised concerns about the impact they have on students' psychological well-being as they fail to consider the causes and the context where behaviour takes place and ignore those very students who are probably in greatest need of social support and an education (Cameron & Thorsborne, 2001 as cited in Harold & Corcoran, 2013; Teasley, 2014). In addition, researchers have found that zero tolerance policies such as school suspension are associated with emotional harm, excessive enforcement efforts, and an increment in future delinquency as a response to coercive control -as punishment can make a person resentful not reflective (Hemphill, Toumbourou, Herrenkohl,

McMorris, & Catalano, 2006; Karp & Breslin, 2001; Stinchcomb, Bazemore, & Riestenberg, 2006; Hopkins, 2007b).

It is argued that behavioural policies that fail to link wrong doing and those affected, deprive the student of the opportunity to feel remorse, learn from consequences, make amends, develop empathy and understanding towards others, and consequently be able to move on (Hopkins, 2007b). In contrast, RJ encourages the exploration, expression and healthy management of emotions within a safe environment (Teasley, 2014)

3.2.2 Restorative Justice: Values and processes

RJ is mainly considered a whole-school approach that is best understood with an 'iceberg' metaphor (Figure 3.1). The top of the iceberg is the way that every member of the school community shows responsibility and interest in repairing, maintaining and building relationships. For this to happen, a restorative philosophy, skills (i.e. active listening and restorative enquiry) and attitudes need to be embedded in the school culture (Hendry, Hopkins, & Steele, 2011; Hopkins, 2004a; Zehr, 2002). This in turn needs to be underpinned by shared values and principles that are best described by Nicholl (1998, p.7) as "healing rather than hurting, moral learning, community participation and community caring, respectful dialogue, forgiveness, responsibility, apology, and making amends".

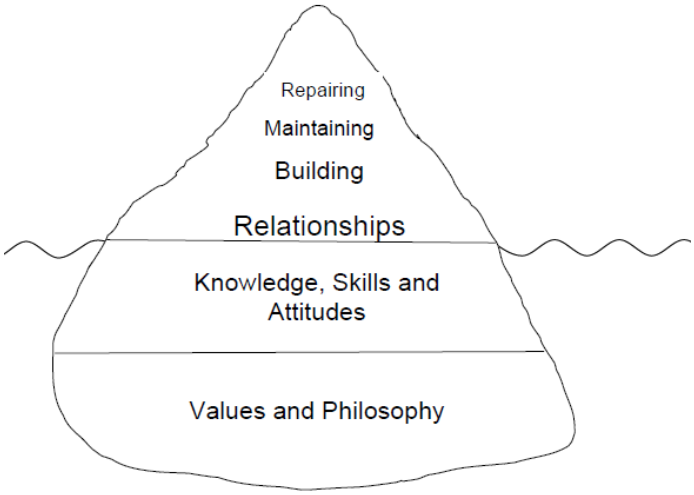

Figure 3.1. The 'iceberg' model of RJ. This Figure illustrates the different levels of RJ as a whole-school approach.

In terms of processes, RJ is about bringing together all those who have been involved in an offence to collectively find ways to repair the harm and resolve the aftermath (Morrison & Vaandering, 2012), where the harmed is part of the decision making process and the wrongdoer is held accountable for their acts (Morrison & Vaandering, 2012). This will depend on the good-will of all the participants, which means that participation must be voluntary. If this is not the case, the process is deemed to fail and the participants should not be persuaded to continue (Drewery, 2004).

In the UK, some schools have adopted the RJ principles as a behavioural framework to deal with misconduct while others use interventions based on RJ principles that operate along a continuum of the gravity of the incident. For example: circle time, a 'no blame meeting', a short/informal restorative conference, and restorative conferencing (Figure 3.2). They may also include preventative lessons on emotional literacy, conflict resolution, social skills and the notion of responsibility (Youth Justice Board for England and Wales, 2004; Thompson & Smith, 2011).

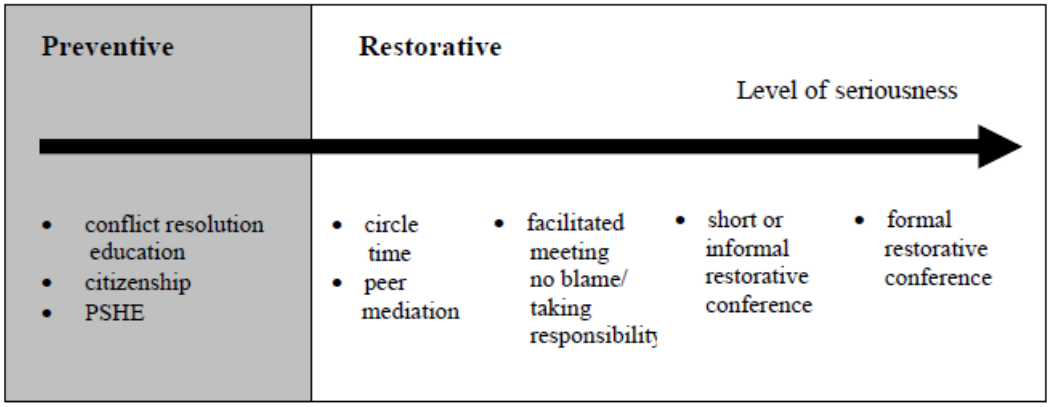

Figure 3.2. RJ interventions in schools. This Figure shows the continuum of RJ-based interventions that may be used in schools depending on the seriousness of the incident.

3.2.3 Restorative Justice in schools: Effectiveness research.

Most of the research carried out in education has explored approaches and interventions in schools that are based on the key principles of RJ (i.e. the importance of repairing harm and restoring relationships) but its delivery tends to be less rigorous and adapted to the school environment (Wachtel, 2013a & Kane et al., 2006). In education these interventions can be called restorative practices or restorative approaches and despite the growing interest there is still limited research into their effectiveness in schools (Kane et al., 2006; Teasley, 2014). For example, in an evaluation of 26 schools in England and Wales commissioned by the Youth Justice Board to explore the impact of RJ on bullying, victimisation and reduction in offending; the authors concluded that "RJ is not a panacea for the problems in schools but, if implemented correctly, it may be a useful resource that improves the school environment and enhances the learning and development of young people" (Youth Justice Board, 2004, p. 68). Even though the authors did not find significant results in some of the outcome measures such as exclusion and pupils' attitudes; they

found that those schools which had implemented RJ as a whole-school approach for at least 2 years saw some statistically significant changes in other areas. For example, racist name calling and verbal threats among students reduced significantly and 92% of the conferences held resulted in successful agreements. Students also reported feeling satisfied with the process while school staff thought that significant improvement in pupils' behaviour had been seen (Youth Justice Board, 2004).

In a 30 month pilot project conducted in Scotland, teachers reported that the use of restorative practices were contributing to more harmonious relationships and students said they were feeling generally positive about their school experience (Kane et al., 2006).

The Department for Education also found settings that used the full range of restorative practices in a consistent way yielded significant results in decreasing bullying incidents compared to partially restorative and non-restorative schools (χ^2 (2) = 7.04, $p<.05$) (Thompson & Smith, 2011). In addition, Moore (2008) found that teachers from 17 schools in England reported that there had been a reduction in the number of incidents involving bullying, inter-personal conflict, victimisation, and in the number of fixed -term exclusions after the introduction of restorative practices. Teachers also reported feeling more confident in dealing with victimisation issues and challenging situations, and believed that pupils were taking more responsibility for their actions.

An evaluation conducted for 3 years at a middle school in the United States found that a whole-school approach to restorative discipline yielded promising outcomes with school suspension falling by 30% and off-campus incidents by 84% during the initial 2 years of the study (Armour, 2013). By the second year the first

cohort (sixth grade participants) continued decreasing in school suspensions by 75% compared to baseline (Armour, 2014). However, during the third year of the study "the school did not continue to make the gains made in Year 2" (Armour, 2015, p.7). Nevertheless, Skinns, Du Rose and Hough (2009) concluded that restorative practices offer a "promising way of increasing the attendance rate" (p.5) and 'reducing fixed-term exclusions in the long term' (p. 6).

Thompson and Smith (2011) also reported the results on student exclusion from two fully restorative schools as case studies. 'Fully restorative' in this study meant that schools embedded restorative principles in the curriculum and all staff was trained in RP. For example, staff was using restorative language, meetings were held with the students and their parents (and if needed other agencies, such as the police), and a series of questions similar to the ones used in this study were used to direct the meetings. Thompson and Smith (2011) found that after introducing RP for two consecutive years, the numbers of students being permanently excluded dramatically dropped from 149 and 257 exclusions to only one. Staff and student attendance had also improved.

Moreover, teachers who students perceive as more restorative in their practices are considered more respectful and seem to have better relationships with their ethnically diverse students. These teachers also seem to issue fewer exclusionary referrals in general but especially to vulnerable groups such as Latinos and African Americans in the United States, showing promising evidence for narrowing the racial discipline gap (Gregory, Clawson, Davis & Gerewitz, 2016).

Lastly, in a 3-year pilot study in schools in Minnesota, school staff reported a significant difference in the pre and post data of in-school and out of school

suspensions, behavioural referrals, physical aggression and increase in attendance. Qualitative data reported that the need for conferences declined when teachers and students started embedding the RJ principles in their daily routine and use them as a first response to conflict (Stinchcomb et al., 2006).

3.2.4 Restorative Conversation: A caring conversation

As seen in Figure 3.2, RJ principles can be used as a flexible model that can be adapted to the severity of an incident (Bartkowiak-theron, 2012; Thompson & Smith, 2011). Thus, a Restorative Conversation (RC) is a simpler version of the Restorative Justice conference and it is theoretically grounded in its principles, values and skills. RC can also be seen as an extension of the 'corridor conversation' or 'the no blame meeting' approach used in RJ (Bartkowiak-theron, 2012; Youth Justice Board for England and Wales, 2004). It is based on a formal scripted dialogue (see Table 3.1) that can be used with one or more students when an incident has been unresolved or requires further action. These incidents by nature are not serious enough for a formal conference but still requires students to reflect on their acts and amend the harm (Bartkowiak-theron, 2012). RC is a more concise and quick way of dealing with the problem immediately after it has happened therefore it is also a more attractive intervention for teachers due to schools' busy environment. An RC can take between 10 to 15 minutes.

Some authors would describe RC as 'restorative enquiry' where the adult uses the skills and language to gently encourage students to identify what has happened, who has been affected and what needs to happen next in order to put things right and move on (Kane et al., 2006).

Table 3.1 Restorative Conversation questions

1. Can you tell me what happened?
2. What were you thinking at the time?
3. How were you feeling at the time?
4. Who has been affected by what you've done? And in what way?
5. What do you need to do to put things right and everyone can move on?

3.2.5 Peer conflict

Conflict is a part of everyday life but when children and young people lack the emotional and social skills to deal with frustration, conflict can lead to painful and harmful consequences for those involved (Sidorowicz & Hair, 2009). For example, research has found that peer conflict is a contributing factor to adolescents' low self-esteem and thus a significant predictor of future depression and suicidal thoughts (Sun & Hui, 2007). Additionally, conflict can turn into violent incidents and aggressive behaviour has been found to be a risk factor for later mental health issues (Ladd, 2006; Troop-Gordon & Ladd, 2005).

As such, conflict is usually seen as something negative but it can also offer students the unique opportunity to develop resolution skills that are unavailable in other relationships (Laursen, Finkelstein, & Betts, 2001). Besides, conflict is also one of the key factors for the formation of cognitive structures and emotions (Shantz & Hartup, 1992). Thus cognitive development triggers advances in social understanding that will encourage a preference for negotiated resolutions (Laursen et al., 2001). Theorists have argued that children develop different strategies to deal with conflict throughout their life-time (Selman & Demorest, 1984). Joshi (2008) notes that

"developmentally, the most advanced strategy is offering a compromise, because it reflects the coordination of perspectives and goals of the self and the other" (Joshi, 2008, p. 134). Thus the use of RJ practices seem a natural progression to aid the acquisition of problem solving, emotional literacy and social skills in children.

3.2 Rationale for this study

Although research is starting to yield some promising evidence of whole-school restorative approaches, to embed cultural change into schools can take between 3 to 5 years, which is beyond the scope of this project (Bartkowiak-theron, 2012; Hopkins, 2007a). Moreover, teachers have reported that a formal *restorative conference* – which is RJ's most complete tool - can be a long and time-consuming process (Bartkowiak-theron, 2012; Thompson & Smith, 2011). A restorative conference "aims to repair the harm done to relationships within a community by an incident involving anti-social behaviour" (Hopkins, 2004b, p.115). It has three stages: a preparation stage, the conference and the follow-up therefore requiring a commitment of a few days to oversee the whole process (Hopkins, 2004b). A conference goes beyond simply gathering all the parties affected (i.e. students, parents, teachers and other members of the community) and finding ways of repairing the harm, moving forwards and eventually aiming for the behaviour to stop (Drewery, 2004) but it can take several hours as everyone is expected to share their experience. Additionally, for a conference to be successful teachers need to become competent restorative practitioners and be fully trained to be able to lead the session in such a way to avoid any power imbalance between the parties which could otherwise rapidly escalate into a hostile exchange (Hopkins, 2004b). For this reason, it is necessary to consider the possible constraints that running a full format conference can have when school staff have not yet seen its benefits. Hence a way to

encourage the adoption of a whole school restorative framework could be by exploring a shorter version of the conference that adapts to the gravity of the incident and more realistically supports teachers' workloads. This was found by Bartkowiak-theron (2012): after teachers became comfortable with a smaller version they were happy to accept a bigger challenge.

Additionally, due to the growing interest that schools are showing in RJ as an alternative to traditional ways of managing behaviour, and the wider move towards evidence-based practice in education; this study aimed to contribute to the research of RJ through the exploration of RC as a more individualised, flexible, accessible and quick tool to deal with minor incidents such as peer conflict. RC preserves the key elements of RJ as a relational intervention that attempts to bridge the gap between discipline and the repair of relationships. Consequently, this study examined whether RC would help reduce students' peer conflict incidents, increase their emotional literacy skills and promote pro-social behaviour.

3.2.7 Research questions and hypotheses

In light of the theory discussed, the following research questions were tested:

1. Does using Restorative Conversations with targeted students lead to a reduction in the number of conflict incidents with their peers?
2. Does using Restorative Conversations lead to an increase in pro-social behaviour in targeted students?

In order to test these questions, the following hypotheses have been examined:

1. Observed peer conflict incidents will decrease during the intervention.
2. Observed pro-social behaviour will increase during the intervention.

3. Targeted students will have low emotional literacy skills and low social competence before the intervention.
4. Targeted students' emotional literacy skills and social competence will increase after exposure to the intervention.

3.3 Method

3.3.1 Design

This study employed a single-case experimental design with a non-concurrent multiple baseline design across five participants. Single-case methods have been recognised as appropriate and valuable for providing a strong basis for establishing causal inferences between the independent variable (IV) and dependent variable (DV) and they are widely used in fields such as psychology and education (Kratochwill et al., 2010). This type of design is also useful in settings where the withdrawal of the intervention would be unethical, or when the introduction of the IV is hypothesised to bring permanent changes that cannot be reversed (Kratochwill et al., 2010; Smith, 2012).

Additionally, single-case designs (SCD) allow the researcher to focus on individual participants. Thus, this design is suitable for studying low incidence and heterogeneous populations such as students who get involved in peer conflict under typical educational conditions such as mainstream classrooms (Horner et al., 2005).

This study used a non-concurrent baseline because the collection of data began at different times (Smith, 2012). A non-concurrent baseline design which staggers the introduction of the intervention at different points in time has some advantages. For example, it allows for flexibility in applied research settings and

controlling for a number of threats to internal validity such as maturation (Watson & Workman, 1981; Kennedy, 2005).

In this study the IV was the use of Restorative Conversations and the DVs were:

- Frequency of peer conflict incidents reported by school staff.
- Frequency of pro-social acts reported by school staff.
- Emotional literacy measured through a student self-reported questionnaire.
- Social competence measured through a teacher inventory.

In this study, peer conflict has been defined as:

> Mutual disagreement or hostility between peers or peer groups. It is characterised as conflict between people of equal or similar power (peers); it occurs occasionally; it is unplanned; and it does not involve violence or result in serious harm. Perpetrators of peer conflict do not seek power or attention. However, peer conflict can escalate into violence. Those involved in violence and aggression usually have comparable emotional reactions, demonstrate some remorse, and actively try to resolve the problem (Sidorowicz & Hair, 2009, p.1).

The definition of emotional literacy (EL) has been taken from Faupel (2003) as "the ability of people to recognise, understand, handle and appropriately express their own emotions and to recognise, understand and respond appropriately to the expressed emotions of others" (p. 3).

The concept of ‘pro-social behaviour’ has been defined by the two constructs that compromise the Social Competence Inventory: ‘pro-social orientation’ and ‘social initiative’ (Booker & Faupel, 2009, as cited in Frederickson & Dunsmuir, 2009). Pro-social orientation refers to “co-operative behaviours such as empathy, helpfulness, generosity and handling conflict” (p.11) and social initiative as behaviours that indicate a willingness and ability to participate in peer related activities such as taking turns, being the leader, etc. (Booker & Faupel, 2009, as cited in Frederickson & Dunsmuir, 2009).

Measures were taken across five participants from two schools. The literature in SCD recommends a minimum of three baseline conditions, however, for multiple baseline designs four or more participants are desired to control Type I error, improve internal validity and add power to the statistical test (Ferron & Jones, 2006; Horner et al., 2005; Kratochwill et al., 2010). The number of replications and the extent to which the intervention’s effect is similar across the participants will help to establish the external validity (generalisability) of the outcomes (Kratochwill & Levin, 2010).

Individual data were obtained but the start dates of the intervention were staggered across schools, grouped into clusters. Each school was randomly given a different starting date (see Table 3.5). Randomisation, even though in clusters, was achieved thereby strengthening the causal conclusions of the outcomes (Kratochwill & Levin, 2010).

Data on participants’ behaviour were collected on a daily basis by either Special Educational Needs Co-ordinators (SENCOs), teachers and/or teaching assistants. According to Kratochwill et al. (2010) a minimum of five data point

collections in the baseline and the intervention phases are needed to strengthen the internal validity of the design and reduce the bias resulting from autocorrelation (Smith, 2012). In this study, baseline was completed across an average of 14 observations, which is above the recommended number suggested by Smith (2012). In addition, schools were asked to keep a daily record of participants' behaviour throughout the 3 months due to the irregular nature of the DV (peer conflict). On average the number of observations carried out during the intervention phase was 31.

The two research questions and hypotheses 1 and 2 were tested using the multiple baseline design. Hypotheses 3 and 4 were tested using the Emotional Literacy Assessment Pupil Form (ELA-PF) and the Social Inventory as pre and post-test measures. For a visual representation of this process please see Figure 3.3.

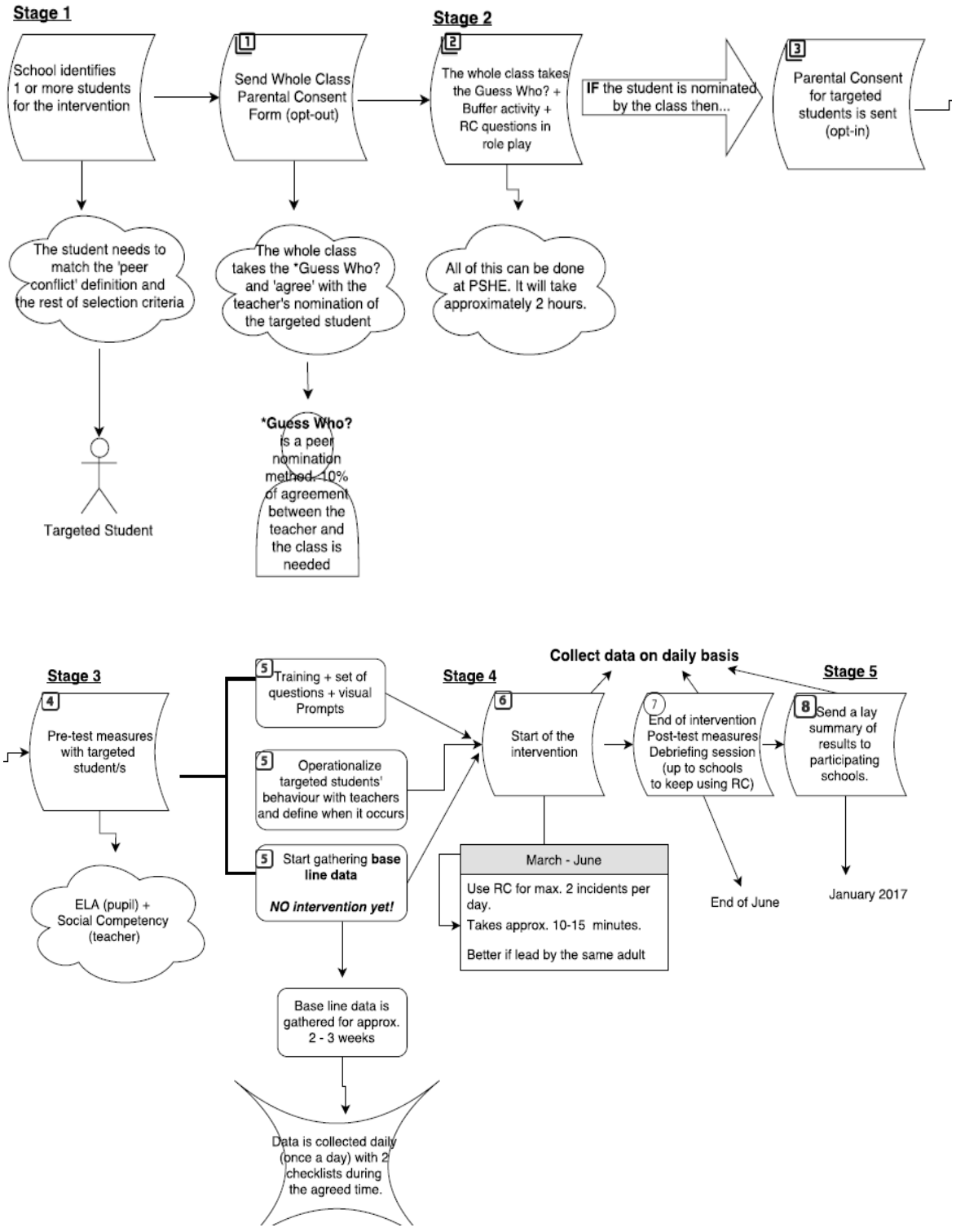

Figure 3.3. Visual representation of the study procedure. This Figure illustrates the design of the present study, including its different stages and the measures taken at different points in time.

3.3.2 Participants

This study started with 11 participants but after collecting baseline data it became clear that one of them was getting involved in bullying behaviour, so it was not considered appropriate to continue. Bullying was defined as “behaviour by an individual or group, repeated over time that intentionally hurts another individual or group either physically or emotionally” (Department for Education, 2017, p.8). Considering ethical issues, the researcher advised the school to destroy the data collected and arrange a meeting with the participant’s parents to explain the reasons for their withdrawal.

In addition, three participants were withdrawn from the study as their behaviour during the baseline phase stopped being a reason for concern and thus the intervention was not being used. Finally, a school with two students decided to withdraw from the study due to internal changes.

The final sample of five participants was drawn from two primary schools in Buckinghamshire. The characteristics of the participants are displayed in Table 3.2. Please see Table 3.3 for the selection criteria.

Table 3.2 Outline of Participants' Characteristics

School	Participant	Gender	Age in years	School year	Key areas of identified need	SEN Support	SES	Primary Language	Main Concern	Attainment in English & Maths	Concurrent or historical intervention exposure in SEMH area
A	Participant 1	Male	9	5	Social and communication difficulties (according to teacher).	None	N/A	English	Lack of social awareness	Below average in both	N/A
	Participant 3	Female	9	5	Social and communication difficulties (according to teacher).	None	N/A	English	Physical aggression	English: below average Maths: average	Autumn term – short social group intervention
	Participant 4	Male	10	6	N/A	None	Free school meals	English	Physical aggression	Average for both	N/A
	Participant 5	Male	11	6	Social and communication difficulties (according to teacher).	With SEN support	N/A	English	Low level disruption behaviour e.g. annoying others	Below average in both	Autumn term – social group intervention
B	Participant 2	Male	9	5	N/A	N/A	N/A	English	Self-centred behaviour	Above average for both	N/A

Table 3.3. Participants' selection criteria

Selection Criteria	Rationale
Students needed to be aged between 8-11 years and attending a mainstream primary school.	The reliability scores of the *Guess Who* and the *Emotional Literacy Assessment* have been calculated for children of those ages.
Students needed to be nominated by their teachers as fitting the 'peer conflict' definition of this study (from Sidorowicz & Hair, 2009) and then validated by their peers by using questions 2 and 4 of a peer nomination questionnaire called 'Guess Who?' (Adapted from Coie, Dodge & Coppotelli, 1982, as cited in Frederickson & Cameron, 1999).	The use of multiple methods to collect data strengthens the validity of outcomes (Kratochwill, 2003) and research has shown that peers and teachers ratings have greater inter method agreement than one source of data only (Coie & Dodge, 1988).
Students must not be considered 'bullies' or be taking part in bullying behaviour (Knowler & Frederickson, 2013).	Bullying or violent behaviour would require a whole RJ approach due to the risk of re-victimising the person who has been harmed (Hopkins, 2004b).
Students were not considered violent or aggressive.	
Students were not at risk of exclusion in the next 6 months.	This study was time limited and participants needed to stay in their school to be able to receive the intervention.
Students did not have any diagnosis of more significant behaviour difficulties such as Oppositional Defiant Disorder (ODD).	Typically developing students tend to be a more homogeneous group making the generalisation of the results more achievable.

The threshold for selecting students to participate in the study by using the Guess Who questionnaire was set at identification by at least 10% of classmates (Knowler & Frederickson, 2013). Consequently, students were independently identified as presenting significant peer conflict behaviour by at least three of their classmates. This procedure yields measures of status that have reasonably good

stability across time (Coie & Dodge, 1988) and across new situations (Coie & Kupersmidt, 1983). The 10% threshold level of peer nominations was substantially exceeded by all the participants (M = 60%).

The final sample consisted of four boys and one girl aged between 8 and 11 years. All the participants were White British, spoke English as their primary language and none of them were receiving support for behaviour and/or social difficulties as part of any social emotional and mental health (SEMH) intervention at that time. However, two participants had received some support the previous term in small social groups (see Table 3.2).

None of the participants had any formal diagnosis but three had 'possible' communication and interaction difficulties according to their teachers. One participant was receiving SEN support, one had Educational Psychologist (EP) involvement, and another had access to free school meals.

SENCOs and classroom teachers identified the participants based on a range of concerns relevant to this study's topic (see Table 3.2). In general, all of the concerns fitted the peer conflict definition and reflected clear difficulties in social competence, pro-social behaviour and emotional literacy skills. Information from teachers indicated a representative spread of attainment in English and mathematics for all pupils.

3.3.3 Procedures

Approval for the study was obtained from the UCL Research Ethics Committee, and from the local authority educational psychology service (EPS) where the study took place.

Link EPs recommended possible primary schools who were then contacted by letter, explaining the purpose and benefits of the programme (for an example of the school information sheet please see Appendix L). Those that showed interest were visited by the researcher to explain the project in more detail. The researcher also gave a presentation about RC and RJ at an 'Emotional Wellbeing in schools' conference attended by several Head teachers, assistant head teachers and SENCOs from local schools. Six schools agreed to take part.

SENCOs and teachers were asked to identify pupils in their school who displayed behaviour that met the peer conflict definition. Once participants were identified (targeted students), parents of all children in their classes were sent a letter on the research project, in which they were given the option for their child to be withdrawn. Additionally, information regarding the Guess Who questionnaire as a whole-class activity was given, explaining the possibility of their child being selected for the research (see Appendix M).

All parents were given at least a week to contact the researcher for further information and/or to withdraw their child from the study. Three parents sought further information and nine children were not given consent to participate.

The rest of children whose parents consented to their participation in the study received a workshop in 'Caring Conversation' (i.e. the name the researcher used to present restorative conversation to the children). This workshop was part of the selection process, lasted approximately 1 ½ hours and included: an ice breaker, the Guess Who questionnaire, a game, a psychoeducation session in Caring Conversation and a role play activity. During these workshops, whole class measures (the Guess Who questionnaire) were conducted by the researcher in the presence of

the class teacher and SENCO. The purpose of the activities was explained to the children in terms of helping the school promote positive relations and a way of dealing with conflict among peers. The voluntary nature of their participation was explained and assurance about anonymity was provided in age-appropriate language. Children were also given an information sheet on the project and they were encouraged to read it and ask questions (see Appendix O). No child declined to participate. The importance of confidentiality was stressed and ground rules were established before the administration of the questionnaire.

To validate SENCOs' and teachers' nominations of the participants, questions two and four of the Guess Who questionnaire – which focused on peer conflict – were used (for a more in depth explanation of the measure please see the Measure section). Once the potential participants were confirmed, active parental consent was sought for those children to participate in the study (see Appendix N). One parent declined their child's participation.

The researcher met with the children for whom parental consent had been obtained to explain the students' involvement in the study and to seek their verbal consent for participation individually (Appendix P). No child declined to participate. All children involved in the intervention also agreed to complete the other study measures and these were administered before and after the intervention.

During the 3 months of the intervention, the researcher kept in regular communication with the schools. An email was sent every fortnight asking how the intervention was going and whether they had any questions, or needed any support with any of the targeted students. Planned monthly visits to the schools were also arranged. During these visits the researcher offered support with the intervention,

checked the fidelity of its delivery, and established inter-observer reliability on the behavioural charts. Following the conclusion of the intervention the researcher met again with the teachers and the participants to re-administer the initial measures, conduct a debriefing session and obtain anecdotal data about the social validity of the intervention. Once results were analysed all the participating schools were sent a lay summary explaining the findings of the project (see Appendix Q).

3.3.4 Establishing the baseline

Prior to the start of the intervention a baseline was established. During the baseline phase every school received a 2-hour training session. This included details on how to use RC, an introduction to some key counselling skills (i.e. active listening, reflecting back and handling silence) and the values and principles of RJ.

Baseline data were collected across all participants for at least 1 week prior to the start of the intervention (see Table 3.4 for an exact account of this time). Daily ratings of the frequency of peer conflict and pro-social behaviour were completed when the behaviour was more likely to appear (see Appendix G and H). This was mainly carried out during classroom sessions but also during unstructured times such as play- and break- time.

As explained above, individual data were collected from participants but schools were given random start dates in clusters. This was done by simply randomly selecting papers with school names from a cup. Four out of the five participants attended school A, therefore they had the same start date (see Table 3.4).

Table 3.4 Participants' base line period

Schools	Participants	Start of baseline	Start of intervention	Total number of baseline weeks
A	Participant 1	08.02.16	15.03.16	4
	Participant 3	08.02.16	15.03.16	4
	Participant 4	08.02.16	15.03.16	4
	Participant 5	08.02.16	15.03.16	4
B	Participant 2	03.03.16	21.03.16	3

Table 3.5 Schools' dates for starting the intervention

School's code	Starting date	Finishing date
School A	15th March	20th June
School B	21th March	20th June
School D	17th March	20th June
School E	18th March	20th June
School F	16th March	20th June

*School C was withdrawn from the study before the intervention started. Schools D, E and F did not finish the study.

3.3.5 The Intervention

Restorative Conversation aimed to decrease the number of peer conflict incidents that the targeted students were experiencing on a daily basis. This was done by promoting students' understanding of how their behaviour had a direct impact on other people's lives. This was encouraged through the direct exploration of students' feelings and thoughts by the use of five structured questions (see Appendix K) (Hopkins, 2004; Zehr, 2002). This was done by way of conversation between the students involved in the incident (both the wrongdoer and the harmed), with the adult

acting as a facilitator. Adults were strongly encouraged to allow students to suggest their own solutions at the end of the conversation.

As explained above, every school received training in RC and the intervention was delivered by either teachers or SENCOs when an incident had occurred. Schools were advised to only use the intervention twice a day when incidents of peer conflict and/or low-level of disruption appeared (see Appendix G for the 'negative behaviour' charts of each participant and Appendix H for the 'pro-social' behaviour charts). According to Hopkins (2004b) some incidents must be done under the whole approach of a restorative conference as some level of remorse and accepting responsibility from the wrongdoer needs to exist to avoid re-victimizing the person who has been harmed. Therefore a list of incidents that would not be advisable to use RC was also provided (see Figure 3.4) and schools were encouraged to use their behavioural policy instead.

Every school was given two sets of material to implement the intervention, this included five different visuals that aimed to support the understanding of the questions and encourage conversation (see Appendix K). In addition, clear and easy to follow guidelines were given as a reminder of what needed to be done before (i.e. preparing a safe environment), during (i.e. asking the five questions and starting the conversation with the wrongdoer) and after (i.e. allowing students to take control over the final decision) the intervention. This contributed towards the integrity and fidelity of the implementation.

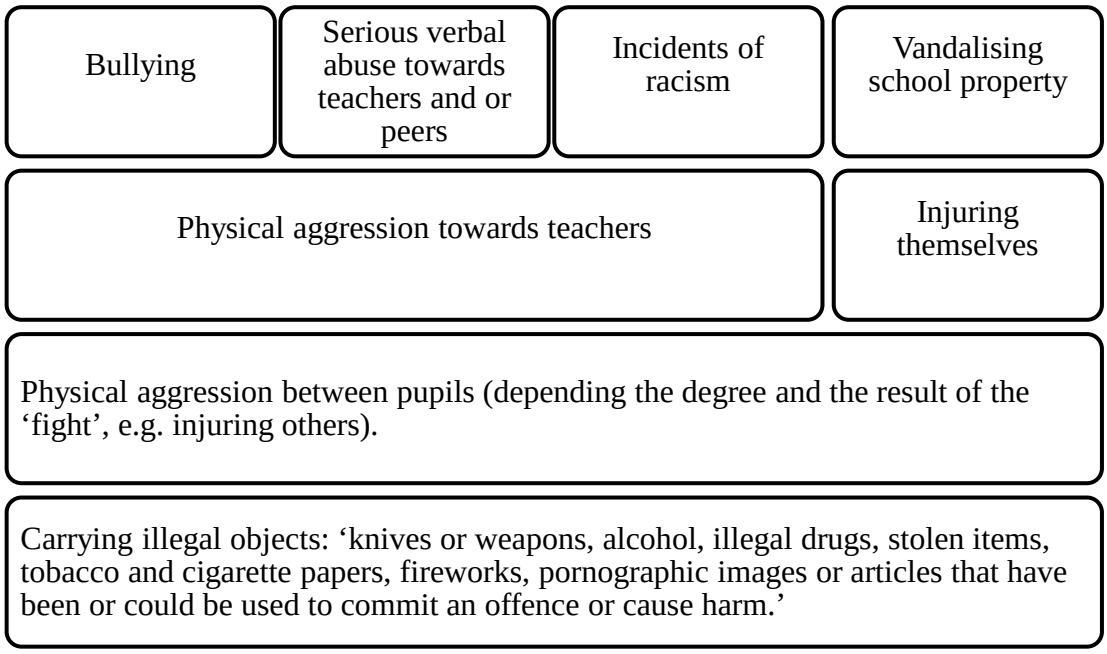

Figure 3.4 What goes beyond RC? (Adapted from DfE, 2014; Hopkins, 2004b, p.128). This Figure outlines incidents for which RC would not be considered an appropriate intervention.

3.3.6 Measures

Peer Conflict: Guess Who questionnaire

Students who engaged in peer conflict were nominated by their classroom teachers and/or the schools' SENCOs. As research has shown that peers' and teachers' ratings have greater inter-method agreement than one source of data only (Coie & Dodge, 1988), nominations were validated by the students' peers by using the *Guess Who* questionnaire.

The *Guess Who* tool is a peer nomination measure that explores students' socio-metric status. It was originally developed by Coie et al. (1982) but in this study the adapted measure by Frederickson and Cameron (1999) was used, following Parkhurst and Asher (1992), to allow unlimited nominations and proportion scores. The original Coie et al. (1982) procedure asked students to nominate three classmates

against each category, while unlimited nominations give the opportunity to effectively assess a student against different characteristics and as many times the student's name appears on rosters (Parkhurst & Asher, 1992).

Children were asked to nominate classmates who fitted each of the following behavioural descriptors: Co-operates, Disrupts, Shy, Fights, Seeks Help, and Leader. Only descriptors two and four were analysed as part of the 'peer conflict' definition. Coie and Dodge (1983) report stability coefficients over a 1-year period ranging from 0.35 to 0.83 for 8 to 9 year-old pupils and 0.53 to 0.84 for 10 to 11 year-olds.

Table 3.6 shows the test-retest reliability of unlimited nominations *Guess Who* descriptors over a 5 week period, based on data from 254 pupils aged 9 to 12 years in the UK (Frederickson, 1994, as cited in Frederickson & Cameron, 1999). Only items 2 and 4 are shown in this Table as they were the only ones analysed in this study.

Table 3.6 Test-retest Reliability of Scores on the Guess Who Peer Assessment Items using Unlimited Nominations

Guess Who item	*Whole class*
Disrupts	0.62
Starts fights	0.79

Emotional Literacy

The participants' emotional literacy (EL) skills were measured using the Emotional Literacy Assessment Pupil Form (ELA-PF) (Faupel, 2003) as "it screens pupils with particular problems in EL" and is "sensitive to differences between low

scorers" (p.28). The ELA-PF is a self-reported measure for children aged 7 to 11 years and it has been standardised in the UK. The pupil form contains 25 items mapped on to the components of EL as defined by Goleman (1996): self-awareness, self-regulation, motivation, empathy and social skills. A 4-point rating scale is used to indicate how well each item describes the pupil: very like me, quite like me, only a bit like me, not like me at all. Example items are: 'I get annoyed when other people make mistakes' and 'I can describe how I am feeling most of the time'. A higher score indicates a higher level of EL.

Table 3.8 shows Cronbach's Alpha for the ELA – PF. As can be seen, the overall emotional literacy scale is sufficiently reliable ($\alpha = .76$) even though some of the subscales are not (i.e. self-awareness). In addition, in a more recent study where the process of selection of 50 primary school English participants who got involved in bullying behaviour was similar to the one of this study, the ELA-PF yielded a Cronbach alpha coefficient of .63 (Knowler & Frederickson, 2013b).

The following cut-off points provided by the author were used (Faupel, 2003, p.28):

Table 3.7 ELA-PF cut-off points

Descriptors	Score range
Well below average	62 or below
Below average	63-68
Average	69-81
Above average	82-87
Well above average	88 or above

Table 3.8 ELA-PF Reliability

Scale	*Number of items*	*Cronbach Alpha*
Self-awareness	5	0.34
Self-regulation	5	0.52
Motivation	5	0.56
Empathy	5	0.46
Social Skills	5	0.61
Overall emotional literacy	25	**0.76**

Social Competence Inventory (SCI)

The participants' social competence was measured using the Social Competency Inventory (Rydell, Hagekull, & Bohlin, 1997). The Social Competency Inventory is suitable for use with primary-aged children between the ages of 5 and 11 years. An adult who knows the child well in the classroom or a group situation should complete it. It consists of 25 items and it aims to explore the perceived quality of the child's social interactions with both peers and adults. Examples items are: 'shows generosity towards peers' and 'tends to be dominated by peers'.

Rydell et al. (1997) reports a Cronbach's Alpha of 0.94 for teacher reports of pro-social orientation and 0.91 for teacher report of social initiative. Table 3.9 shows test-retest reliability for teachers' reports on two occasions with a year gap between assessments.

Table 3.9 Test-retest Reliability of the SCI for Teachers' Report

Scale	*Teachers (n = 75)*[a]
Pro-social Orientation	0.59***
Social Initiative	0.81***

[a]Children rated by a new teacher at 9 years old excluded.
***p < .001

Peer conflict and pro-social behaviour: Daily monitoring

A daily bespoke behavioural chart for peer conflict and pro-social behaviour was devised to monitor students' behaviour and detect any changes over time. This constituted the multiple baseline measure (see Appendix G and H). Some of the examples of negative behaviours were taken from a 'Behaviour Problems Checklist' from Wheldall and Merrett (1988) and some of the examples of the pro-social behaviour were taken from the Social Competency Inventory (Rydell et al., 1997 as cited in Frederickson & Dunsmuir, 2009).

3.3.7 Ethics

Ethical approval for the methodology and procedure used in this study was gained from the UCL Research Ethics Committee (Appendix I and J). Ethical issues were addressed in the following ways in line with the British Psychological Society Code of Ethics and Conduct (BPS, 2009):

Informed consent and self-determination

All those involved in data collection and implementing the intervention (i.e. teachers, SENCOs and lunch supervisors) were provided with an information sheet as part of the informed consent procedure (see Appendix L). Participants, parents and

SENCOs/teachers were given at least a week to communicate with the researcher and discuss any issues they had. Written consent was obtained from the participants' parents and verbal consent was obtained from each participant before the intervention started (using the forms found in Appendices M, N, O, and P).

In addition, the researcher met with each child individually and gave them the opportunity to ask questions. This ensured all potential participants had the opportunity to gain an understanding of how they were going to be involved in the study before they gave informed consent. Participants were also informed via the information sheet about their right to not participate in the study without needing to provide a reason.

Confidentiality and Data protection

The researcher ensured the participants' right to confidentiality was met throughout the study. Therefore the data reported in this study have been anonymised. Participants were informed that confidentiality would only be breached in the case of safety concerns but none appeared in the study.

Possibility of stigmatisation

As the potential for stigmatisation of children being chosen for 'bad behaviour' was noted by the UCL Research Ethics Committee, the researcher encouraged schools to speak with the participants' parents about the benefits of the intervention, that is the encouragement of dialogue and restoration of relationships rather than punishment for misbehaviour. The researcher also highlighted Restorative Conversation as a preventative approach, reducing certain behaviours before they become difficult to deal with.

Continuity of care from school staff

During training, the researcher emphasised the need of school staff being aware of any potential disclosures during the Restorative Conversations. If this was the case, the researcher suggested that staff use their normal safeguarding and child protection procedure.

Debriefing

The targeted students and teachers had a separate debriefing session at the end of the study. This was done during the post-test measures phase and involved a brief discussion about the past 3 months, how they had perceived the intervention, and if they had noticed any changes in the students' behaviour or relationships. The researcher also took the opportunity to thank students and school staff for their participation in the study.

3.4 Analysis

3.4.1 Multiple Baseline Design Data Analysis

To answer research questions 1 and 2 and explore hypotheses 1 and 2, the data were visually inspected and statistically analysed. The visual analysis followed Kratochwill et al.'s (2010) criteria in search of evidence of a causal relationship between the IV and the DV. The coding manual and technical coding protocol for single case design (SCD) was used to establish the strength of the baseline of each participant (Kratochwill, 2003).

Visual analysis is still considered the primary method for examining and interpreting the effects of an intervention on the outcomes of interest when a SCD is

used (Kennedy, 2005). However, due to the subjectivity of visual analysis, statistical evaluation was also used as a way of complementing and strengthening the validity of the study (Harrington, 2013).

Figures 3.5 and 3.6 show the four steps and six variables examined to check any causal relation between the IV any the DV (Fisher, Kelley, & Lomas, 2003; Hersen & Barlow, 1976; Kazdin, 1982; Kennedy, 2005; Morgan & Morgan, 2009; Parsonson & Baer, 1978).

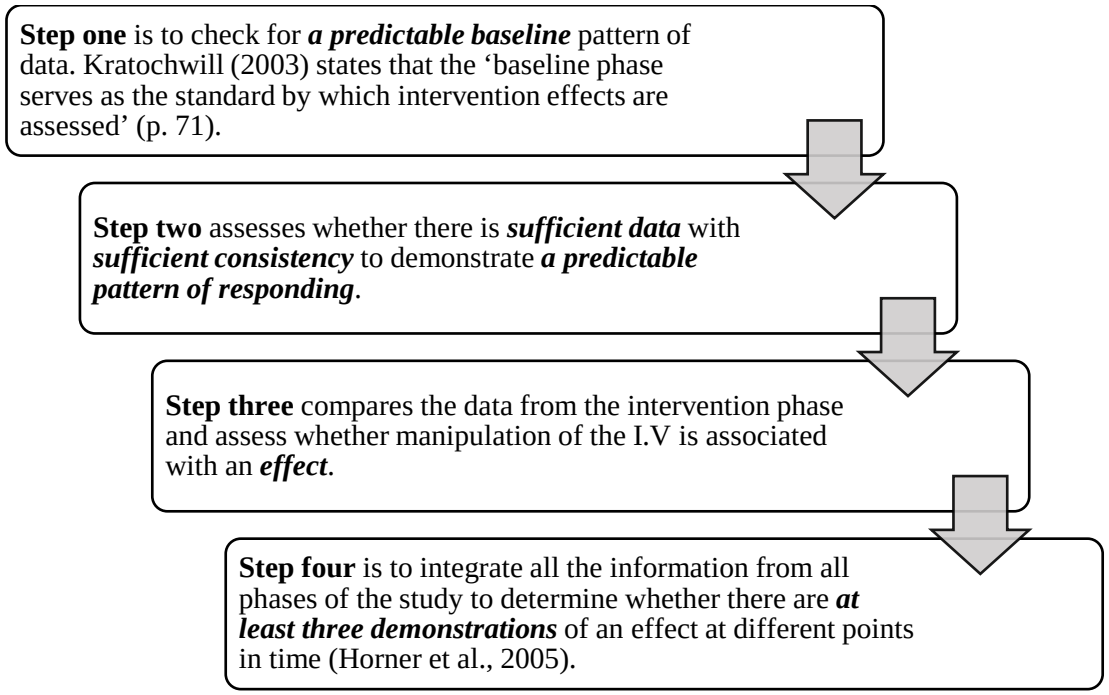

Figure 3.5. Four steps for visual analysis (Kratochwill et al., 2010, p. 18).

Level refers to the mean score for the data within a phase. In the baseline phase, the behaviour needs to be serious enough to warrant the intervention (Kratochwill, 2003).

Trend refers to the line or slope of best-fit for the data within a phase. In this study a downwards slope indicated improvement in negative behaviours while an upwards slope indicated improvement in pro-social behaviour (Kratochwill, 2003).

Variability refers to the stability or fluctuation of individual data points in relation to the overall trend (Kratochwill, 2003).

Immediacy of effect refers to the level change seen in the last three data points in the baseline and the first three data points of the next phase. The quicker the effect, the more effective the intervention is considered (Kratochwill, 2003). However, in this study this feature was not strictly measured due to the irregular nature of the behaviour explored.

Overlap refers to the proportion of data points from the baseline that overlap with the intervention phase. The smaller the overlap among data points, the more obvious the effect of the intervention (Kratochwill, 2003).

Consistency of data patterns across similar phases involves checking for patterns within the data from similar phases. 'The greater the consistency, the more likely the data represents a causal relationship' (Kratochwill, 2003, p. 18).

Figure 3.6 Six variables to examine within and between phase data patterns.

Effect sizes were calculated using two non-overlapping data methods: the Percentage of data Exceeding the Median (PEM) and Tau-U (Parker, Vannest & Davis, 2011). Non-overlap indices are recommended for SCD as they are robust enough to handle the non-parametric data that characterises SCD, they do not make assumptions about distribution of data and they are easy to interpret (Parker et al., 2011; Parker, Vannest & Davis, 2014).

PEM refers to the percentage of data points in the intervention phase that exceed or are below (depending on the case) the median in the baseline phase (Ma, 2006). PEM is easy to calculate and interpret, and it has been previously used in SCD meta-analysis (Ma, 2009; Preston & Carter, 2009).

Tau-U is a new index which has comparative advantages to some of the most common overlap effect sizes such as PND, PAND, PEM and IRD (Parker et al., 2011; Rakap, 2015). Tau-U enjoys several strengths such as: established statistics like Kendall's Tau test of association and the strongest non-parametric statistics for comparing two groups Mann Whitney- U (Parker et al., 2014). Tau-U also possesses higher precision power and reduces human error as it is done by a computer (Parker et al., 2011). Furthermore, Tau-U controls for trend within the intervention phase and it provides the option of controlling for undesirable positive baseline trend (monotonic trend) (Parker et al., 2011). In other words, Tau-U could be described as the percentage of non-overlapping minus overlapping data (Parker et al., 2014). Tau-U is a strong effect size that permits comparison with other SCD studies (Parker et al., 2014). In this study, Tau-U was computed using the following software: http://www.singlecaseresearch.org/calculators/tau-u

Table 3.10 presents the benchmarks for interpreting the effect size estimates calculated in this study. Table 3.15 shows a summary of the visual inspection and statistical analysis of the raw data collected through the observation of peer conflict and pro-social behaviours. Table 3.11 presents the raw data of each participant for EL and social competence skills.

3.4.2 Analysis of Emotional Literacy and Pro-Social behaviour measures

In order to address Hypothesis 3:

- The *ELA-PF's* scores were identified as 'average', 'high' and 'low' by using the descriptors provided in Table 3.7. Any score that was not in the average range but fell within the 'below average' and 'well below average' range was

considered a ‘low’ score, and any score that fell in the ‘above average’ or ‘well above average’ range was considered ‘high’.

- For the *SCI* scores, the means and standard deviations (SDs) provided in the manual were used only as a guide due to the possible differences between the population from which they were derived and the one used in this study (Gallagher, 2003). Nevertheless, Gallagher (2003) provides mean scores and SDs derived from teacher completion of the inventory for children aged 9-10 years in the USA. Her numbers are consistent with the original standardisation sample. For the Pro-social Orientation subscale, the mean score was 3.37 (SD = 0.70) with a higher score reflecting greater prosocial orientation. On the Social Initiative subscale, the mean was 3.42 (SD = 0.82) with higher scores indicating more social initiative. A score of one or two standard deviations below the mean would indicate problems that require further investigation. In this study, this was considered a ‘low’ score (Frederickson & Dunsmuir, 2009).

Table 3.10 Benchmarks to Interpret PEM and TAU-U (Rakap, 2015, p. 27)

Method	Score range	Ineffective	Questionable	Effective	Very effective
PEM	0-100	$x \leq 50$	$50 < x \leq 70$	$70 \leq x < 90$	$x \geq 90$
TAU-U	0-100	$x \leq 65$		$66 \leq x \leq 92$	$x \geq 93$

Note: Data included in this Table are percentages. ‘x’ represents an effect size score.

To address hypothesis 4, the Reliable Change Index (RCI) was used with every participant's pre and post scores for the *ELA-PF* and *SCI* (Jacobson & Truax, 1991). RCI is a standardised z-score that defines whether the change in an individual's performance is reliable enough and statistically significant to confidently consider that the difference in scores is not due to measurement error but rather to the interaction between the IV and DV. The formula used for the RCI is:

$$\text{RCI} = \frac{\text{post} - \text{pre}}{SE_{\text{diff}}} =$$

Statistically significance was checked at an alpha set at .05 using the following software: http://www.socscistatistics.com/pvalues/normaldistribution.aspx

Analysis was conducted for the total scale scores for the ELA-PF differentiating between the male and female standard deviation given by the authors. For the SCI, the two subscales scores were analysed separately. The same cut-off points for both measures explained above were used.

Table 3.11 Summary of Raw Scores for Participants' ELA-PF and SCI

Participants	Social Inventory				Emotional Literacy Assessment	
	Pro-social Orientation		Social Initiative			
	Pre	Post	Pre	Post	Pre	Post
Participant 1	1.76	1.65	1.63	2.75	85	86
Participant 2	3.06	2.47	4.25	4.63	82	88
Participant 3	2.65	3.35	3.75	4.50	51	48
Participant 4	3.29	3.24	4.50	4.50	68	61
Participant 5	2.47	1.94	4.38	4.13	77	73

Table 3.12 Participants' Reliable Change Index

Participants	Reliable Change Index					
	Social Inventory				Emotional Literacy Assessment	
	Pro-Social Orientation	*p*-value	Social Initiative	p-value		*p*-value
Participant 1	-.46	.65	**3.2**	.00	.15	.88
Participant 2	**-2.46**	.01	1.09	.28	.88	.38
Participant 3	**2.92**	.00	**2.14**	.03	-.47	.64
Participant 4	-.21	.83	0	1	-1.02	.31
Participant 5	**-2.21**	.03	-.71	.48	-.58	.56

3.4.3 Inter-rater Reliability

Inter-observer agreement was measured with Kendall's Tau-b once a month over the 3 month period of the intervention. Kendall's Tau-b is a correlation coefficient used for non-parametric data with small samples. It measures the strength and direction of association that exists between the two variables measured. It is considered a non-parametric alternative to Pearson's and Spearman's rank-order correlation coefficients (Laerd Statistics, 2016).

Table 3.13 Inter-observer Agreement

Participants	Kendall's Tau-b	*p*-value
Participant 1	1**	N/A
Participant 2	.39*	.03
Participant 3	-.12	.67
Participant 4	1	N/A
Participant 5	1	N/A

*Correlation is significant at the .05 level.
** Correlation is significant at the .01 level.

3.5 Results

The results of the multiple baseline design, the ELA and SCI have been presented and analysed by participant.

3.5.1 Multiple baseline design and measures findings

Participant 1 (P1)

Visual inspection of P1's peer conflict and pro-social behaviour before and after the intervention indicated no clear effects. As can be seen in Figures 3.7 and 3.8, the baseline in both graphs fluctuated significantly which made it difficult to establish any clear changes in the intervention phase. Prior to the intervention, this participant had a mean of 2 peer conflict incidents per day. PEM and Tau-U scores reported in Table 3.14 indicated that RC was ineffective in reducing peer conflict incidents for this participant.

However, the pro-social graph appears to show a slight trend upwards during the treatment phase. PEM found RC to be 52% effective, however Tau-U found this result to be non-significant.

P1's emotional literacy (EL) skills were above the average before the intervention. However, his pro-social orientation and social initiative skills were low. According to the RCI, P1's social initiative skills increased significantly after the intervention.

Participant 2 (P2)

Visual inspection of P2's peer conflict behaviour showed a positive effect of the intervention. Prior to the intervention, this participant had a mean of 8.5 peer conflict incidents per day. The intervention phase showed immediacy of effect with a reduction to 3.1 incidents per day, and a decreasing and relatively stable trend in the desired direction. PEM showed 93% effectiveness of RC in reducing peer conflict and Tau-U indicated that this was statistically significant.

No evidence of a causal relation between the intervention and the increase of pro-social behaviour was observed for P2.

P2's EL, pro-social orientation and social initiative skills were within the average range before the intervention. Interestingly, P2's pro-social orientation skills decreased significantly after the intervention.

Participant 3 (P3)

Visual inspection of P3's peer conflict behaviour showed no clear effects of the intervention. Prior to the intervention, this participant had a mean of 0.75 incidents per day. PEM and Tau-U scores indicated that RC was not significantly effective in reducing peer conflict incidents for P3.

Looking at the pro-social observation data, the baseline data appeared highly variable which made it difficult to establish any clear changes between the phases.

P3 had a mean of 2.4 pro-social acts per day before the intervention. During the intervention phase, the mean increased to 3.4. The PEM of 72% found RC to be effective in increasing pro-social acts for P3. However Tau-U found the result to be non-significant.

P3's EL and pro-social orientation skills were low before the intervention. According to the RCI, RC significantly increased P3's pro-social orientation and social initiative skills after the intervention.

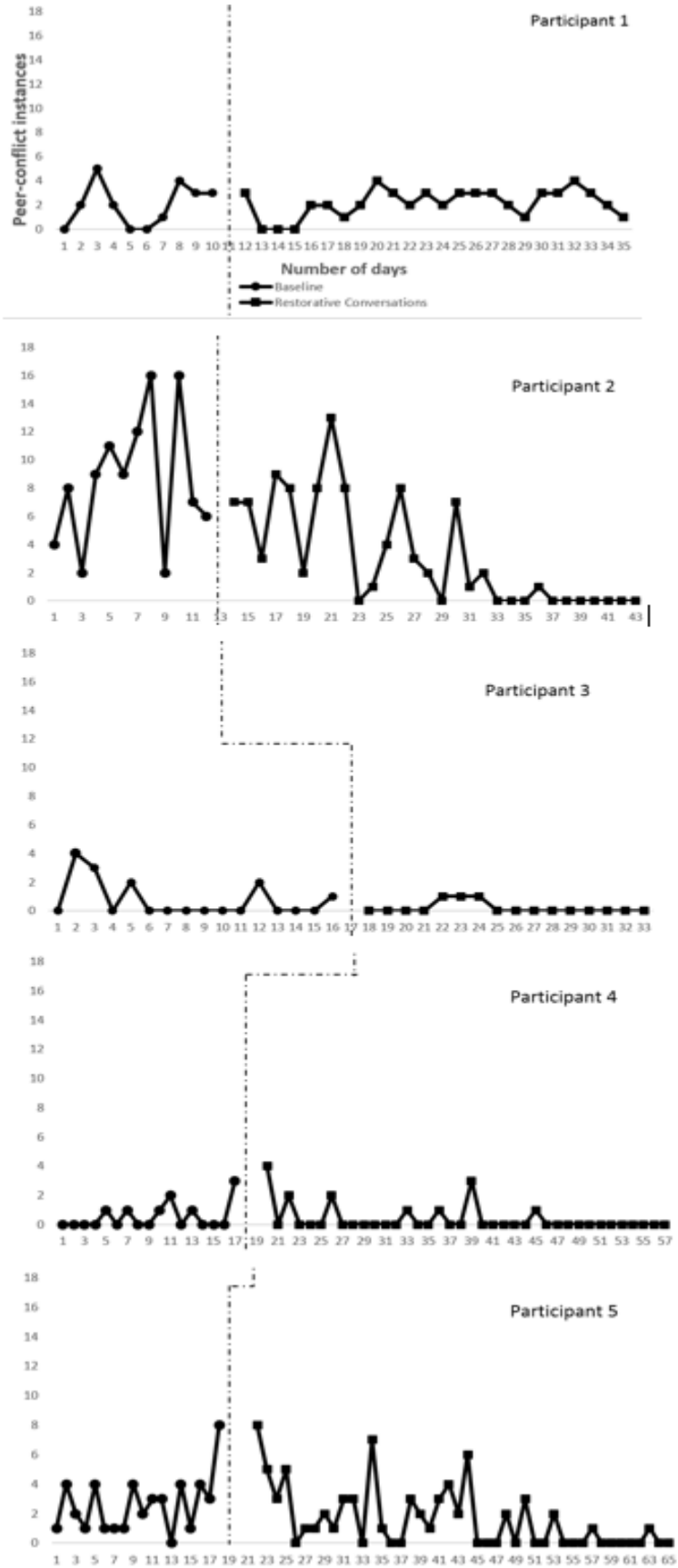

Figure 3.7 Visual representation of the impact of Restorative Conversation on students' peer conflict behaviour.

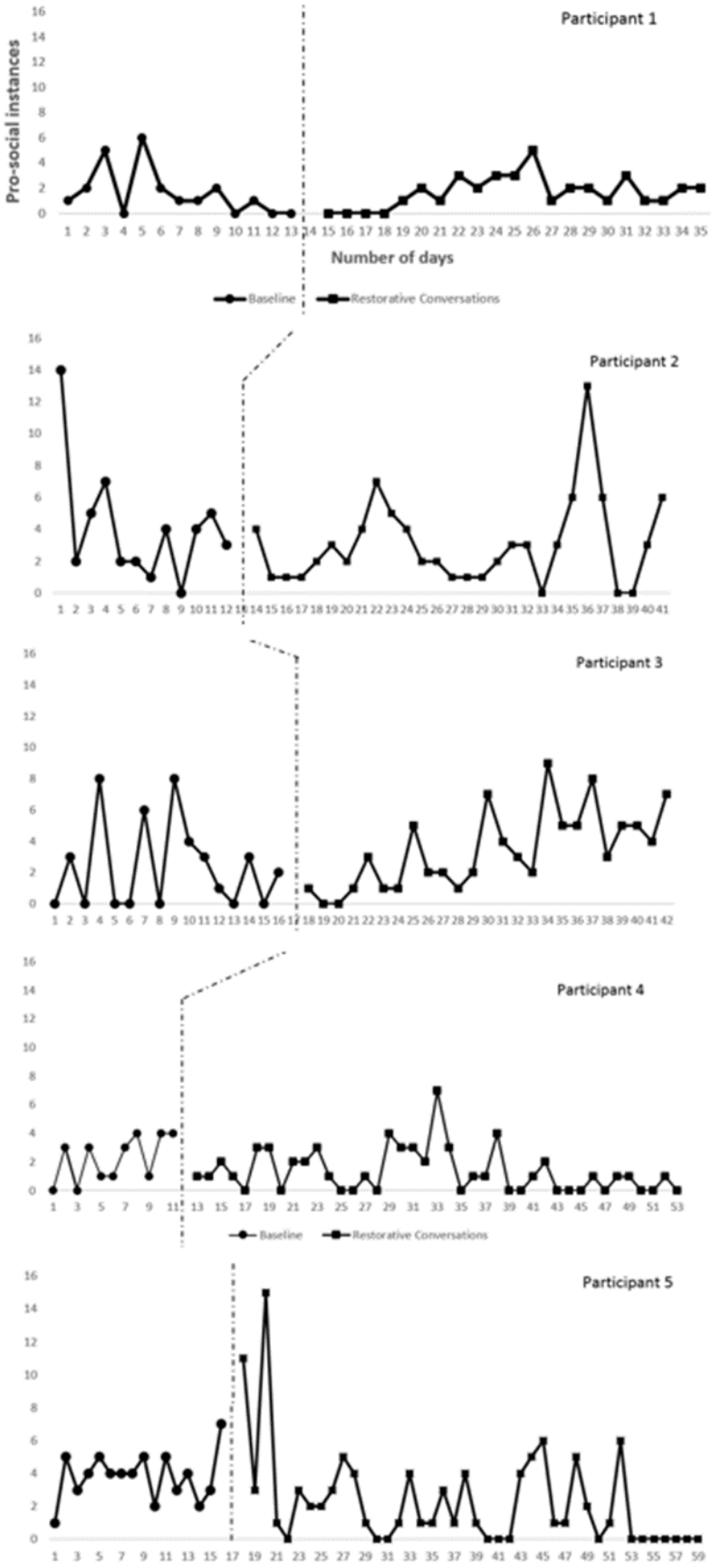

Figure 3.8. Visual representation of the impact of Restorative Conversation on students' pro-social behaviour.

Participant 4 (P4)

Visual inspection of P4's peer conflict behaviour showed a weak effect of a casual relation between the IV and DV. The intervention phase showed a fluctuating but overall decreasing trend and there was some overlapping among both phases. This participant had a mean of 0.5 incidents per day before the intervention. PEM and Tau-U indicated that RC was ineffective in reducing peer conflict incidents for P4.

Looking at the pro-social data, both phases appeared unstable making the identification of a causal relation between the IV and DV difficult. PEM found RC ineffective in increasing pro-social behaviour in P4. However, Tau-U found a significant negative effect between RC and pro-social behaviour.

P4's EL skills were low before the intervention. According to the RCI, no significant changes in any of the ELA and SCI subscales were seen after the intervention.

Participant 5 (P5)

Visual inspection of P5's peer conflict behaviour showed a weak casual relation between the IV and DV. This participant had a mean of 2.6 incidents per day during the base line phase. The intervention phase showed immediacy of effect with a decrease to 1.6 peer conflict incidents per day. PEM found RC to be 72% effective in reducing peer conflict incidents. Tau-U confirmed this score as significant.

No evidence of a causal relation between the intervention and the increase of pro-social behaviour was observed for P5. PEM found RC to be ineffective, however, Tau-U found a significant negative effect between RC and pro-social acts.

P5's EL skills and pro-social orientation skills were low before the intervention. Interestingly, according to the RCI, P5's pro-social orientation skills significantly decreased after the intervention.

Table 3.14 Summary of Effect Sizes

PEM

Participants	PEM Peer Conflict Behaviour	Descriptors
Participant 1	.25	Ineffective
Participant 2	.93	Very effective
Participant 3	0	Ineffective
Participant 4	0	Ineffective
Participant 5	.72	Effective

Participants	PEM Pro-social Behaviour	Descriptors
Participant 1	.52	Questionable
Participant 2	.32	Ineffective
Participant 3	.72	Effective
Participant 4	.07	Ineffective
Participant 5	.12	Ineffective

Tau-U

Participants	Tau-U Peer Conflict behaviour		Descriptors
	Tau-U	Z score / *p*-value	
Participant 1	.08	.38 / .71	Ineffective/Questionable
Participant 2	**-.66**	**-3.29 / .00**	Effective
Participant 3	-.17	-.83 / .41	Ineffective/Questionable
Participant 4	-.15	-.89 / .37	Ineffective/Questionable
Participant 5	**-.39**	**-2.40 / .02**	Ineffective/Questionable

Participants	Tau-U Pro-social behaviour		Descriptors
	Tau-U	Z score / p-value	
Participant 1	.15	.71 / .48	Ineffective/Questionable
Participant 2	-.18	-.91 / .36	Ineffective/Questionable
Participant 3	.30	1.58 / .11	Ineffective/Questionable
Participant 4	**[a]-.40**	**-2.03 / .04**	Ineffective/Questionable
Participant 5	**-.52**	**-2.99 / .00**	Ineffective/Questionable

[a]Corrected for baseline trend.

Table 3.15 Summary of results for Visual Analysis

Participants	Total number of Restorative Conversations	Summary of Visual Analysis	
		Peer Conflict Behaviour	Pro-social Behaviour
Participant 1	4	[1]QBL: no evidence [2]*No effect*	QBL: no evidence *No effect*
Participant 2	7	QBL: promising evidence *Effect*	QBL: no evidence *No effect*
Participant 3	3	QBL: promising evidence *Weak effect*	QBL: weak evidence *Weak effect*
Participant 4	7	QBL: weak evidence *Weak effect*	QBL: weak evidence *No effect*
Participant 5	3	QBL: weak evidence *Weak effect*	QBL: no evidence *No effect*

[1]QBL = 'Quality of Baseline' rating (Kratochwill, 2003)
[2]Effect = whether a casual effect has been found between the IV and DV (Kratochwill et al., 2010)

3.5.2 Summary of findings

Students received an average of 4.8 Restorative Conversations during the three months of intervention. All the participants displayed a significant number of peer conflict incidents before the intervention (M= 2.9 per day) which warranted the need for the intervention.

Hypothesis 1: Observed peer conflict incidents will decrease during the intervention

Overall, there was a pattern of reduction in peer conflict incidents for four out of five participants. Two demonstrations of an effect were found to be significant for Participants 2 and 5 with percentages of 93% and 72% respectively according to PEM. Tau-U, although with more conservative percentages, confirmed these findings to be statistically significant in reducing peer conflict incidents for both participants with percentages of 66% and 39% respectively.

Hypothesis 2: Observed pro-social behaviour will increase during the intervention

Restorative Conversation did not appear to have an overall impact in promoting students' pro-social behaviour. However, according to PEM, RC was 72% effective in encouraging positive behaviour for P3. This finding was not found to be significant by Tau-U. Nevertheless, Tau-U found a statistically significant negative relation between RC and pro-social behaviour for P4 and P5.

Hypotheses 3 and 4:

3. Targeted students will have low emotional literacy skills and low social competence before the intervention.

4. Targeted students' emotional literacy skills and social competence will increase after exposure to the intervention.

In relation to ELA scores, three participants had a low score before the start of the intervention but no significant changes were seen afterwards. The SCI yielded contradictory results. Three participants had a low score for pro-social orientation before the intervention. However, only the score of P3 significantly increased after the intervention. Interestingly, the scores of P2 and P5 significantly decreased following the intervention. All these findings will be discussed in section 3.6.

3.5.3 Fidelity of treatment and Social validity

The fidelity of the intervention was checked during monthly visits by the researcher. This was done through conversation with those delivering the intervention. In addition, a 'Restorative Conversation Guidelines' form, highlighting the steps, questions and key elements of the intervention were given to each school as a memory aid (see Appendix K3). The fidelity of the intervention proved to be very high.

At the end of the study, debriefing sessions were conducted with all participants and the school staff who delivered the intervention. Students and teachers were asked to share their opinion about the efficacy of RC in dealing with peer conflict incidents. In general, students and teachers provided very positive feedback about RC (see Table 3.16 for examples). Thus, anecdotal data provided information about the social validity of the intervention.

Teachers also commented on the length of each conversation and even though on average a conversation took approximately 15 minutes, in general they felt satisfied with the end result. In the words of a Year 5 teacher '*it takes me approximately 15 to 30 minutes [depending on the number of children involved in the*

conversation] but I don't regret it as having the RC means I don't have to deal with things during the lesson'.

Table 3.16 Anecdotal information about participants and school staff experiences with RC

Students' comments	School staff comments
'I liked it because you get to express your feelings and what you could do better' (Y5 student)	*'The best outcomes I have seen is when I use RC'* (Y5 teacher)
'You feel welcomed. You know, you can trust them. It's good to share how you feel so they can help you' (Y6 student)	*'RC helps me to unpick the situation'* (Assistant Head)
'It's hard to answer the questions because you don't want to share it, you think you may get in trouble… but it's nice to sort things out' (Y5 student)	*'I have learned so much about the children'* (Y6 teacher)
'I like it because I don't have to keep the problem inside of me' (Y5 student)	*'Interestingly the same issue doesn't reappear after having used RC. You save yourself time in the long-term'* (Y5 teacher)
'It's a bit awkward to sit with the others but I already feel better by talking to them' (Y5 student)	*'Children are starting to be able to understand their own actions'* (Assistant Head)
'It's hard to answer some of the questions as I don't always remember or I don't want to think about it anymore' (Y5 student).	*'I have liked it, I will keep using it'* (Y5 teacher)

Teachers were also asked about the suitability of the visuals. In general, they agreed that the visuals were not necessary with these participants due to their age range. However, they also said that they could be a useful tool when the aim is to increase emotional vocabulary and understanding of feelings.

3.6 Discussion

This study is the first to explore whether Restorative Conversations have any effect on reducing students' peer conflict incidents, fostering more pro-social behaviour, as well as providing an initial glance into its effectiveness in areas such as emotional literacy and social competence.

3.6.1 Peer conflict

In answering the first research question of this study and exploring hypothesis 1, the results showed initial effects of RC reducing peer conflict incidents in students who have difficulties interacting with others. The data showed a decreasing trend in four out of five students, even though only the results of two participants were found to be significant. P2's PEM found RC to be 'very effective' (93%) while for P5, PEM found RC to be 'effective' (72%) in reducing peer conflict. According to Horner et al. (2005), in SCD at least three demonstrations of an effect are necessary to suggest that the intervention has been responsible for any changes in the DV. Although this was not the case in this study, there are certain elements that need to be considered. Firstly, there were two substantial differences in the data collected by teachers. Unfortunately, some had not kept a consistent track of students' behaviour and others failed to observe the targeted behaviour where it was most likely to occur. For example, initially most teachers said that problematic behaviour took place during unsupervised hours (e.g. break time) rather than in lessons. This could have meant that potential changes in behaviour were missed.

Secondly, this study only measured the frequency of peer-conflict incidents in general terms (as can be seen on each participants' chart – Appendix G) but it did not consider the type or severity of behaviours. For example, it may be that apparent lack

of change in P1, P3 and P4 actually reflected a change in the type of conflict, from more to less severe (e.g. from punching someone to giving a mean look) as a result of RC.

Thirdly, research has shown that interventions based on RJ principles such as RC yield promising results in the area of inter-personal conflict and bullying when they are applied for longer periods of time, such as two to three years (Thompson & Smith, 2011; Moore, 2008). Similarly, the Education Endowment Foundation (2016) advised that behaviour programmes produce more long lasting results when implemented for two to six months (EEF, 2016). This means that some students may need to be exposed to the intervention for longer for changes in behaviour to be found statistically significant.

Finally, contemporary cognitive models propose that learning occurs when new information obtained from the external environment is added to previous knowledge in a process called ‘mental representational re-descriptions’ (Karmiloff-Smith, 1995). The new information is learnt when the child no longer focuses on external data, but rather when "system-internal dynamics take over so that internal representations become the focus of change" (Karmiloff-Smith, 1995, p. 19). According to Karmiloff-Smith (1995), this process is not related to chronological age and can take different amounts of time depending on the child. Therefore, it could be said that the promising decreasing trend in peer conflict incidents seen in this study could have become significant, if given more time – that is, a ‘sleeper effect’ when changes are observed much later in development (Sklad et al., 2012).

It is interesting to note that no specific patterns in P2’s and P5’s prior academic skills, reported main concern or prior negative behaviours were found

(Table 3.2). However, according to the visual analysis, the intervention showed immediacy of effect for both students. The difference in the number of conversations that each participant had is another important element to consider, as towards the end of the study P2 was involved in seven conversations while P5 was involved in three. It is encouraging to notice that participants' behaviour improved independently of the number of RCs they received. In other words, in these two cases, the number of conversations did not appear to be a factor for behaviour improvement but perhaps the quality of the conversations they had. Additionally, the difference in number of RCs received could also be explained by the initial number of incidents that the participants had at base line. P2 showed an average of 8.5 incidents per day while P5 had an average of 2.6 incidents. In other words, P2 probably simply needed more conversations because they were involved in more incidents to start with.

Although qualitative data were not formally gathered in this study, it is useful to consider teachers' feedback (Table 3.16). They seem to be consistent with the view that the use of informal restorative practices fosters an environment where students develop awareness, empathy and responsibility that in the long-term proves more effective than traditional disciplinary approaches (Bartkowiak-theron, 2012; Wachtel, 2013b).

3.6.2 Pro-social behaviour

The second research question of this study and hypothesis 2 aimed to explore whether RC lead to an increase in pro-social behaviour. The results showed an increasing trend for P1 and P3, and although PEM found RC to be 'questionable' and 'effective' in promoting pro-social behaviour, Tau-U did not find these results to be significant. Non-overlapping analytical methods such as PEM and Tau-U were used to avoid any subjective bias that the visual analysis may have (Harrington, 2013).

However, these contradictory results between PEM and Tau-U pose a difficult question in the interpretation of the intervention's effectiveness in this area.

In addition, unexpected and more contradictory results were found in this section. Tau-U found RC to significantly decrease the number of pro-social acts that P4 and P5 performed during the intervention. Perhaps a better way of understanding these results is by viusally exploring the data. According to Kratochwill (2003):

> The baseline phase provides information about the level of a dependent variable before the intervention begins and serves as the standard by which intervention effects are assessed. As such, the baseline phase is a critical component of measurement that has two important functions: (1) it describes the extent of a participant's problems, and (2) it provides a basis for predicting behaviour if the intervention was not implemented (p. 71)

As seen from Figure 3.8, the baselines of these participants were extremely variable, making it very difficult to draw any conclusions on the intervention effects as no clear patterns were found. Secondly, the participants where RC appeared to significanlty reduce their pro-social behaviour had a baseline mean of 2.2 and 3.8 pro-social acts per day. This means that these students were already displaying pro-social acts leaving small scope for improvement. In other words, it could be said that this was not necessarily an area of need for these students.

To bring more clarity and to triangulate any unanticipated results, this study used the Social Competence Inventory as a pre-post measure (Table 3.12 - Reliable Change Index) . Here, it was found that P1 and P3 increased their scores significantly after the intervention in the 'social initiative' subscale, while P3 significantly also increased in the 'pro-social orientation' subscale. However, P2 significantly reduced

the ‘pro-social’ subscale score after the intervention and P4 and P5 did not show any changes. In other words, there is a clear disparity in the way RC seems to affect pro-social behaviour in students engaging in peer conflict. However, as mentioned above this did not seem to be an area of prior concern for any of the participants as the overall mean showed that participants were doing approximately three pro-social acts per day. Behaviours such as saying ‘please and thank you’, including others in games, offering help and preventing conflict (see Appendix H) are socially desirable behaviours that could be described as social skills (Elliott & Busse, 1991).

According to research, social skills need to be explicitly taught and its generalisation also needs to be purposefully guided by modelling, rehearsing and by giving specific feedback (EEF, 2016; Elliott & Busse, 1991). Thereby a way of understanding the conflicting results in this area is by considering two points: a) if there is a reduction in peer conflict, it would not be unreasonable to assume that pro-social behaviour might eventually replace it; however, b) there may be more active teaching needed before significant changes in pro-social behaviour can be seen. In other words, according to the findings of this study, pro-social behaviour does not improve automatically as a result of using RC but rather it needs to be modelled and taught. Nevertheless, these hypotheses need more research. Additonally, it is important to consider that ‘positive behaviour’ could be more easily ignored and forgotten thus making these behaviour more difficult to record accurately.

3.6.3 Emotional literacy and Social competence

This study also aimed to explore the skills of the targeted students in relation to EL and social competence. It was hypothesised that they would have low EL skills and social competence before the intervention and these would increase after the intervention. The results found that two out of five students had low EL skills before

the intervention, however, no significant changes were found post-intervention. In relation to social competence, three participants had a low score in the 'pro-social orientation' subscale and one had a low score in the 'social initiative' subscale before RC started. At the end of the intervention, P3 showed a significant increase in both scales. In addition, P1 also showed a significant increment on the social initiative subscale. However, P2's and P5's pro-social orientation scores significantly decreased post- intervention. Some possible explanations for these findings have been discussed in the previous section.

Additionally, research has suggested a multi-component approach to increase the effectiveness of EL interventions (Bond & Hauf, 2004; Durlak, 1997; Gresham, 1995). This includes a *sequenced* step-by-step training approach, *active* forms of learning, *focussing* sufficient time on skills development, and having *explicit* learning goals. Consequently, it could be said that EL skills -like social skills-, need to be purposely taught and not indirectly expected to be acquired or developed by students as it was the case in this RC intervention. However, more research is needed in this area.

3.6.4 Strengths and Limitations of the study

This research has three noteworthy strengths. Firstly, as far as it has been possible to establish, this is the first study that has used Restorative Conversation as a targeted intervention with children with a specific issue, such as peer conflict. It has yielded promising results in the area of interpersonal conflict which coincides and contributes to previous research carried out in the area (Thompson & Smith, 2011; Moore, 2008).

Secondly, this study was undertaken in the 'real world' and made considerations for the limitations that schools and teachers have when implementing behavioural interventions. This has strengthened the ecological validity of the results and the potential usability of the intervention.

Lastly, the triangulation used to identify and select the participants was very rigorous as students needed to pass multiple 'layers' to confirm their suitability for the research. Consequently, the positive trend found in decreasing peer conflict should be considered encouraging for Restorative Justice as an alternative to traditional approaches for managing behaviour.

Most limitations of the study are related to methodological issues. Firstly, throughout the study it became apparent that teachers were unsure of what behaviours they were meant to record (even though every category had at least one example provided by them). In hindsight, further operationalisation of what 'peer conflict' and 'pro-social' behaviour were would have strengthened the validity of the outcomes.

Secondly, as mentioned in the analysis section, baseline data were affected by high variability, lack of clear trends and the presence of outliers, which impeded the clear identification of any post-intervention effects. According to Ferron and Jones (2006), 'response guided experimentation' could have been a good alternative of control for these difficulties. Response guided experimentation is the extension of the baseline phase which leads to more data and the probability of establishing a trend, seeing effects, avoiding Type II errors and consequently, strengthening the internal validity of the study (Ferron & Jones, 2006).

Thirdly, the sample size poses a challenge to any attempts of generalising the results. It is recognised that small samples and the lack of a control group makes generalisation challenging. Therefore, even though this study found promising results, it is difficult to say whether they could be relevant to other individuals in different settings (Barlow, Nock & Hersen, 2009).

Fourthly, inter-rater reliability was another area where this study needed improvement, as the lack of an operationalised concept for the different behaviours may have affected the outcomes. Inter-rater agreement could have been done more than once a month to develop a better understanding between the observers.

Lastly, this study is aware of the limitations that the Emotional Literacy Assessment Checklist (Faupel, 2003) could have had in the exploration of hypothesis 3. Faupel (2003) acknowledges that the pupil version had some subscales which did not meet the minimum scores for reliability, therefore objectivity was not assured. Future research could include stronger measures and more triangulation to check the outcomes.

3.7 Conclusion and Implications for Future Research and Practice

Although most research in RJ has been done as a whole-school approach (as this is considered the ideal way of implementing RJ) it is promising to see that its principles and values may sometimes bring changes when they are used at a micro-level with some students with specific concerns such as peer conflict.

In this study, the use of RC as a targeted intervention has yielded some initial positive evidence. A decreasing trend in peer conflict incidents was found in four out of the five students, however only two were found to be significant. The findings for

pro-social behaviour were contradictory and somewhat unexpected. Similar unclear results were seen with EL skills and social competence.

Consequently, in order to clarify these findings, future research needs to continue exploring the impact that an abbreviated version of the RJ principles, such as RC, has at an individual level. The analysis of the type and severity of behaviours would also complement the frequency of occurrence that has been explored in this study. Additionally, the use of small-N designs for longer periods of time and a careful follow up, could provide more insight on how RC may bring change on specific issues (i.e. peer conflict). Thus adding to the evidence of RJ as an alternative or complimentary approach to schools' behavioural policies.

In addition, more rigorous research is needed across the full area of RJ as a whole-school framework, as there are already promising findings for responding to 'difficult to tackle' issues in schools such as bullying. In fact, following what current research says on RJ, the main advice still would be for schools to consider implementing RJ as a whole-school approach first and then supporting it with RC as a way to responding to less serious incidents.

Exploring how the adults leading the conversation are influenced by RJ is also an area where there are still gaps in knowledge. Teachers in this particular study consistently mentioned how RC was helping them to understand and see individual students in a different light.

Finally, investigating whether the use of visuals (as the ones suggested in this study) and the inclusion of a sixth question 'Is there anything you would do differently next time to avoid this in the future?' (Hopkins, 2004a) -could enhance

students' ownership of their acts and consequently encourage ways to not repeat the same behaviour in the future.

In conclusion, this study is another contribution to the field of RJ as an alternative approach to discipline and behavioural policies in schools. Its findings also have direct implications for Educational Psychologists (EPs) since the potential use of restorative practices in schools to respond to difficult behaviour is a consideration for everyone in education, especially EPs. EPs are in a privileged position to explicitly acknowledge the pitfalls and benefits of traditional disciplinary approaches, plus they are able to suggest for restorative ways of dealing with wrongdoing and make restoration and maintenance of relationships the primary objective in schools.

It is well known that current changes in the EP profession and practical constrains like limited time, resources and statutory demands could become an impediment for EPs to do the job they train to do: bring psychology into schools (Cameron, 2006). However, a way EPs can overcome these difficulties is by providing school staff with the knowledge and training to use evidence-based interventions that are easy to implement and have the potential to become the future foundation for a cultural change in the way educators respond to students' wrongdoing.

This study has found that an abbreviated version of the RJ conference in the form of Restorative Conversations could bring behavioural change to some individual students who engage with peer conflict, and it is also achievable and quick to implement. Thus it overcomes the two barriers of limited time and the need for long training mentioned by teachers in other studies (Bartkowiak-theron, 2012). In

other words, RC can be seen as a cost effective intervention for schools and EPs as it could be offered as an extension of behavioural strategies already employed by teachers that use dialogue as a response to dealing with misbehaviour (Youth Justice Board for England and Wales, 2004). The main difference would be that RC provides a more structured framework which is based on the principles and values of RJ. In this way, RC and RJ would not feel completely foreign to schools but instead would help teachers to feel more empowered by having pre-defined questions and an easy to follow set of guidelines (Bartkowiak-theron, 2012). This may give schools the opportunity to experience the advantages of restorative practices by attempting a 'smaller' version first, before perhaps wanting to explore further into whole-school approaches integrating the principles and values of RJ into daily instructional practices. According to research, RJ is the model that is yielding initial promising outcomes in terms of improving pupils' behaviour, reducing racist name calling, bullying, interpersonal conflict, and school exclusions, and promoting more harmonious relationships (Kane et al., 2006; Moore, 2008; Osher, Bear, Sprague, & Doyle,2010; Thompson & Smith, 2011; Youth Justice Board, 2004). Most importantly, students who do not respond to traditional behavioural approaches would be given an opportunity to feel listened to, take responsibility over their actions, be involved in the solution process and amend relationships with those students who have been harmed.

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CHAPTER 4

Dissemination and Impact

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4.1 Introduction

Over the past few years, evidence-based practice (EBP) has become the dominant movement in the delivery of human services such as psychology and education across the UK. This has had the aim of promoting interventions of a good quality, such as those that have been effective in leading to positive outcomes for students (Fox, 2003). It was hoped that this would lead to professional practice being based on effective evidence, and that this consequently would result in best practice being implemented, improving children's and families' services (Biesta, 2007; Fox, 2003; Hornby, Gable, & Evans, 2013; Thyer, 2013). However, despite these high expectations and promises of using only 'what works' there is still a significant gap between research findings and day-to-day practice in these fields (Hornby et al., 2013).

This chapter is concerned with how knowledge is produced in the field of educational psychology and how it can be translated into real and practical terms for its users. This chapter starts by looking critically at evidence-based practice as the 'gold standard' approach for the current delivery of educational psychology. It will explore the elements that have made this approach a desired model in academia but it will also discuss some of its pitfalls.

This chapter will also explore practice-based research (PBR), which is introduced as a complimentary approach to EBP and a way to bring research into the real world of schools. Following the principle that one of the role of educational psychologists (EPs) is to transfer and translate theory and research into practice, this chapter concentrates on the current study as an example of both EBP and PBR. Finally, this

chapter provides a dissemination strategy for this study and discusses ways that the impact of its findings could be measured.

4.2 Knowledge Transfer

4.2.1 Evidence-Based Practice (EBP)

Since the arrival of the EBP movement in the 1980s and its adoption by fields such as medicine, agriculture and technology in the UK in the 1990s, these areas have seen steady and revolutionary progress which still continues today (Slavin, 2008). Over time, other professions such as psychology and education have joined the trend of using an EBP approach with similar hopes (Biesta, 2007; Fox, 2003; Hornby, Gable, & Evans, 2013).

There are many authors who have tried to define EBP according to their field of work but currently there is a general agreement on the term being defined as "practices and programs shown by high-quality research to have meaningful effects on students' outcomes" (Cook & Odom, 2013, p. 136). This means that EBP aims to explore whether a particular intervention has a meaningful and measurable effect on a specific question relating to a student's needs (Barkham & Mellor-Clark, 2003).

However, in the field of psychology, according to the American Psychological Association (APA), EBP is the 'integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences' (APA, 2008, p. 5). This definition is in line with the one adopted some years ago by medical sciences, where the movement started, in an attempt to consider the

background, values and expectations of the client within an ecological model of their needs:

> Evidence-based medicine (EBM) requires the integration of the best research evidence with our clinical expertise and our patient's unique values and circumstances... By patient values we mean the unique preferences, concerns and expectations each patient brings to a clinical encounter and which must be integrated into clinical decisions if they are to serve the patient... By patient circumstances we mean their individual clinical state and clinical setting (Straus, Glasziou, Richardson, & Haynes, 2011, p. 1).

Thyer (2013) argues that EBP is far from being a medical model where professionals simply choose the best empirically supported interventions without fully considering the person's background. Instead, Thyer (2013) insists that EBP is 'atheoretical with respect to etiology (biological or psychosocial), neutral with respect to who provides the services (physicians versus social workers), and neutral with respect to what those services should be (e.g., biological or psychosocial)' (p. 3). In psychological terms, EBP should be thought of as a guide for psychologists to find and, consequently, promote effective psychological interventions which are empirically supported by a previously well-considered analysis of the problem, case formulation, and monitoring of outcomes (APA, 2008).

The EBP movement was born with the intention to address the following issues: to identify the most effective practices to increase students' outcomes (Cook & Odom, 2013), to bring equality to services and establish best practice across

professionals (Fox, 2003; Walker, 2003) and most importantly, to bridge the existing gap between information gathered through research, and information used to inform policy and practice (Biesta, 2007). To address these difficult challenges, EBP has adopted the 'gold standard' of randomised controlled trials as the preferred design, within the hierarchy of research evidence, to assess whether or not an intervention 'works' (Biesta, 2007).

As the pressure to raise students' outcomes increases and public funding decreases, the need to adopt and implement programmes that have been rigorously evaluated and show evidence of effectiveness becomes more pressing (Wiggins, Austerberry, & Ward, 2012). Currently, there are national and international organisations created with the sole objective of reviewing research and providing information and guidance on *'what works in education?'*

For example, in the UK the Education Endowment Foundation, the Cochrane Library, and the Evidence for Policy and Practice Information and Co-ordination Centre (EPPI-Centre), and in the US the What Works Clearinghouse (WWC), have established strict criteria of what constitutes a 'high quality of research' and which effect sizes are considered acceptable in order for interventions to be deemed worth investing in. However, as the following section discusses, EBP is not without pitfalls and more information is needed in order to make it a complete, realistic and sufficient model to support practice and policy in psychology and education in the real world of working with schools and families.

4.2.2 Problems with Evidence-Based Practice

In the past three decades there has been an exponential increase in research exploring the effectiveness of interventions in education in general but particularly in special education (Hornby et al., 2013). However, EBP has not been able to fully address the issues mentioned in the previous section, showing that it is an incomplete, although well-intentioned, approach.

For instance, despite the amount of funding that has been designated to assess educational programmes, some of which have demonstrated evidence of their effectiveness to improve students' outcomes, there is a clear resistance from most educators to change the way they practice. As traditionally, the way educators assess an intervention is through following their own experience, listening to others' opinions, or ultimately asking for expert advice (Cook & Smith, in press). This, of course, is closely linked to the fact that not all interventions, whether they have had their evidence-base reviewed or not, work for every child (Cook, Tankersley, Cook, & Landrum, 2008). In fact, it is well known that there will always be a small percentage of students who do not respond to certain interventions and, consequently, their progress needs to be carefully monitored and reviewed by teachers and EPs in order to find other alternatives to help them progress with their learning (Cook & Odom, 2013).

Moreover, interventions designed to be implemented in schools do not only need to be 'scientifically valid' but they also need to be socially valid for educators to adopt them. For example, interventions need to fit well with the school environment and also be culturally appropriate for the teachers who will implement them as well

as the students and families who will benefit from them (Cook & Cook, 2011; Habib, Densmore-James, & Macfarlane, 2013).

Additionally, there are four standards to identify EBP interventions: quality of research design, quality of research studies, quantity of research studies, and magnitude of effect (Cook & Cook, 2011). Although RCTs are the preferred choice to establish causality of effect and, in most cases, meet the mentioned criteria, this design is not without its faults. According to Killin and Della Sala (2015), some issues need to be addressed before considering RCTs as the ultimate test of effectiveness. For example, they warn us that significant results with impressive effect sizes could be tainted by biases in research funding, study design, or publication. They caution research consumers to be critical about the sources of certain studies because companies or authors who support a specific intervention tend to find mostly 'positive' outcomes. Killin and Della Sala (2015) also suggest that the design of studies can be a major element of bias. For example, when researchers find 'anything' beneficial for a particular intervention, or when an intervention is compared to a placebo or no therapy, instead of an active or competing treatment. In other words, designing 'safe' studies that will guarantee some sort of significant finding. In addition, a well-known phenomenon in academia is publication bias, where positive or significant findings are seen as more attractive to journal publishers rather than negative or non-significant ones. In the event that negative findings are published, these tend to appear much later that positive ones clearly affecting the information professionals obtain on a specific topic (Killin & Della Sala, 2015). For example, in the case of some antidepressants (Ioannidis,

Munafò, Fusar-Poli, et al., 2014). Moreover, as RCTs often have a big data set, the authors also suggest that this is the perfect space to be 'creative' with the data and "find or massage the desired effect in spite of what was declared at the outset" (Killin & Della Sala, 2015, p. 290).

Secondly, EBP was expected to create guidelines for best practice among professionals. However, there is still disagree on what constitutes 'quality of research' in education and what type of interventions schools are likely to adopt (Fox, 2003). Also, the difficulty in accessing current research, the lack of time or knowledge available to professionals to critically analyse contradictory results, and the cultural differences among schools and Educational Psychology Services (EPS), have trumped the government's desire to reduce variations among services and create guidelines for 'best practice' (Fox, 2003; Walker, 2003).

Finally, EBP has not been able to close the gap between what is shown to be effective in current research and what education professionals implement in their day-to-day practice. For example, Hornby et al. (2013) have written a useful summary of four current international reviews of different interventions, and discussed possible reasons for their findings not having influenced teachers' performance in the way that might be expected. According to Green (2008), this gap is due to 'the stubbornness of the practitioners insisting on doing it their way, their hubris in believing they know their [students] best and the smugness of scientists believing that if they publish it, practitioners will use it' (p.1).

There is a great deal of debate about whether EBP is an adequate framework for use in the fields of education and psychology. It may be that EBP is too 'pure' to be realistically implemented in the classroom and therefore not fitting with 'how' teachers do things (Biesta, 2007; Green, 2008). In addition to this, in most schools there is the belief that existing educational practices that have been used for several years are there for a reason, so they are the best way of doing things. Also, many teachers have a mistrust about educational research as they see it as oversimplifying the real issues in schools; this makes the introduction of EBP in schools a real challenge. To compound these issues, the poor accessibility to, and difficulty in understanding research findings, as well as the 'one off workshop' that most schools receive about how to run new interventions, adds to the list of barriers for EBP in bridging the gap between education research and practice.

In conclusion, despite the rigorous scientific model that EBP offers in the identification of effective interventions there is an obvious 'missing link' between real life scenarios and research carried out in the 'lab'. Consequently, the next section looks at practice-based research as a complimentary approach in the translation and dissemination of knowledge to lay audiences.

4.2.3 Practice-Based Research (PBR) as a complimentary approach to EBP

In light of the problems which EBP present in natural settings where the implementation of interventions is very different to that of clinical settings, PBR could be considered an option to supplement its flaws. Unlike EBP, there is not an agreed international definition for PBR (at the time of writing). However, Epstein (2009) offers a general idea of its main characteristics: PBR is 'inductively informed

by practice wisdom, rejecting of randomized controlled experiments, employing both qualitative and quantitative methods, open to original instrument construction and essentially formative' (p. 6). Also, Smith, Schmidt, Edelen-Smith and Cook, (2013) offer a useful summary of how EBP and PBR complement each other in their description of the Pasteur's quadrant concept: they merge 'the contributions of rigorous, scientific research with the real-world application concerns of teachers and other educational stakeholders (Newkirk, 2009) to generate practices that are both internally and externally valid, practice-based and evidence-based…' (p. 153).

One way that PBR would complement EBP and help close the gap between research and practice is by reinforcing some of the critical elements that would ensure the adoption, utilisation and implementation of interventions in schools. PBR could help overcome issues that EBP seems to have neglected, such as: paying more attention to external validity; making research a more participatory activity between researchers and practitioners; and considering practitioners' previous knowledge (Green, 2008).

While EBP has concentrated on assuring the causal relationship between two variables is properly demonstrated so there is internal validity, PBR focuses on how generalizable the outcomes are to other situations and populations, so that there is external validity. According to Green (2008), too much rigour in research conducted in fields like psychology and education leads to a risk of producing research which is scientifically valid but useless in real life. Green (2008) suggests that what schools really need is evidence of interventions that work with students like their own, in settings like their own, that have been implemented by staff like their own facing

similar challenges to their own. In other words, what teachers need is research that is not only carried out in their schools but is implemented by them while dealing with normal day-to-day issues.

PBR also attempts to close the gap between research and practice by assuming that there is a direct and mutual relationship between these two areas. PBR provides the opportunity for professionals to use their skills for carrying out assessment, interventions and outcomes monitoring, while gathering valuable information that can then be feedback to researchers. Therefore, TEPs, EPs and teachers are in the privileged position of being able to bring science closer to their actual work situation and get involved in the development of action research, participatory research, or naturalistic research as PBR is also known (Brownson & Jones, 2009). Thus, evidence of what, how and under what circumstances interventions work or do not work can be collected and considered for future advice about the development, implementation, and dissemination of new studies. This will shape research into a more relevant and attractive source of information for practitioners.

Moreover, PBR can also help shed light on the reasons for some interventions appearing successful in certain circumstances and not in others, and even highlighting any potential negative effects of some interventions on students' outcomes (Kratochwill et al., 2012). This information would be impossible to obtain in traditional EBP studies (Kratochwill et al., 2012).

Nonetheless, if EBP is to become a participatory exercise, allowing professionals to participate in the research process, then it also needs to revisit the mistaken idea

that teachers and other professionals are ‘empty vessels’ ready to receive new information to put into action (Green, 2008). Many researchers may need to reconsider the idea that they are the ones who generate valid knowledge while practitioners are the ones called to use it. If PBR is to properly compliment EBP then practitioners’ prior knowledge and experience needs to be regarded as part of the knowledge-building process where practitioners are seen as ‘reflective’ contributors to research instead of obstacles to it (Epstein, 2009).

PBR has the potential to enrich EBP so it makes sense to establish a set of criteria to ensure the quality of the evidence collected through PBR. Falzon, Davidson and Bruns (2010) have suggested a framework of five steps:

1. Formulate a clear question about the [student] or research issue.
2. Search the literature to find the best available evidence related to this issue.
3. Critically appraise the evidence for its validity, accuracy, and usefulness.
4. Apply useful findings, integrating them with clinical expertise and the [student’s] characteristics, culture, and preferences.
5. Evaluate the outcomes and, if necessary, initiate a refined search.

Nevertheless, if the only purpose that research is given is to explore ‘what works’ then this runs the risk of taking away the original purpose of research – to expand knowledge by challenging the way that the world is seen and the questions that are asked (Furlong & Oancea, 2005). However, as shown by point number four of the framework proposed by Falzon et al. (2010), EBP and PBR can complement and enrich each other by giving birth to a new model, involving a ‘knowledge base… that

is both rigorous and relevant' (Barkham & Mellor-Clark, 2003, p.323) (see Figure 4.1). As, ultimately, both EBP models and PBR models have the intention of providing 'more effective, efficient, and humane service to clients and patients: in other words, to reduce suffering and to promote healing' (Epstein, 2009; p. 223).

In conclusion, the uniqueness of PBR is that, while studies are designed and monitored in an evidence-based way, the research activity is carried out by the professionals who face the daily challenges of real life settings. This leads to professionals being empowered and given the opportunity to be more than research consumers. This partnership between practitioners and researchers is what would permit the extension of research knowledge with information from the natural context of practice (Kratochwill et al., 2012).

4.3 Role of Educational Psychologists in Transferring and Translating Knowledge

EPs, unlike other professionals in education, are in the privileged position of being able to produce change at three different levels: individual (working with a student or group), organisational (working with school staff), and strategic (working on projects in local authorities) (Curran, Gersch & Wolfendale, 2003). Nowadays, EPs' training provides them with the skills to objectively appraise theory and research and make informed decisions about current evidence-based interventions, as well as having the capacity to be involved in the gathering of knowledge related to their field (Cameron, 2006). Moreover, EPs have the unique opportunity to work with students and families in a preventative and holistic/systemic way before any

issues escalate (Kratochwill, 2007). Therefore, their contribution to transferring and translating knowledge to lay audiences is crucial in the EBP and PBR movements.

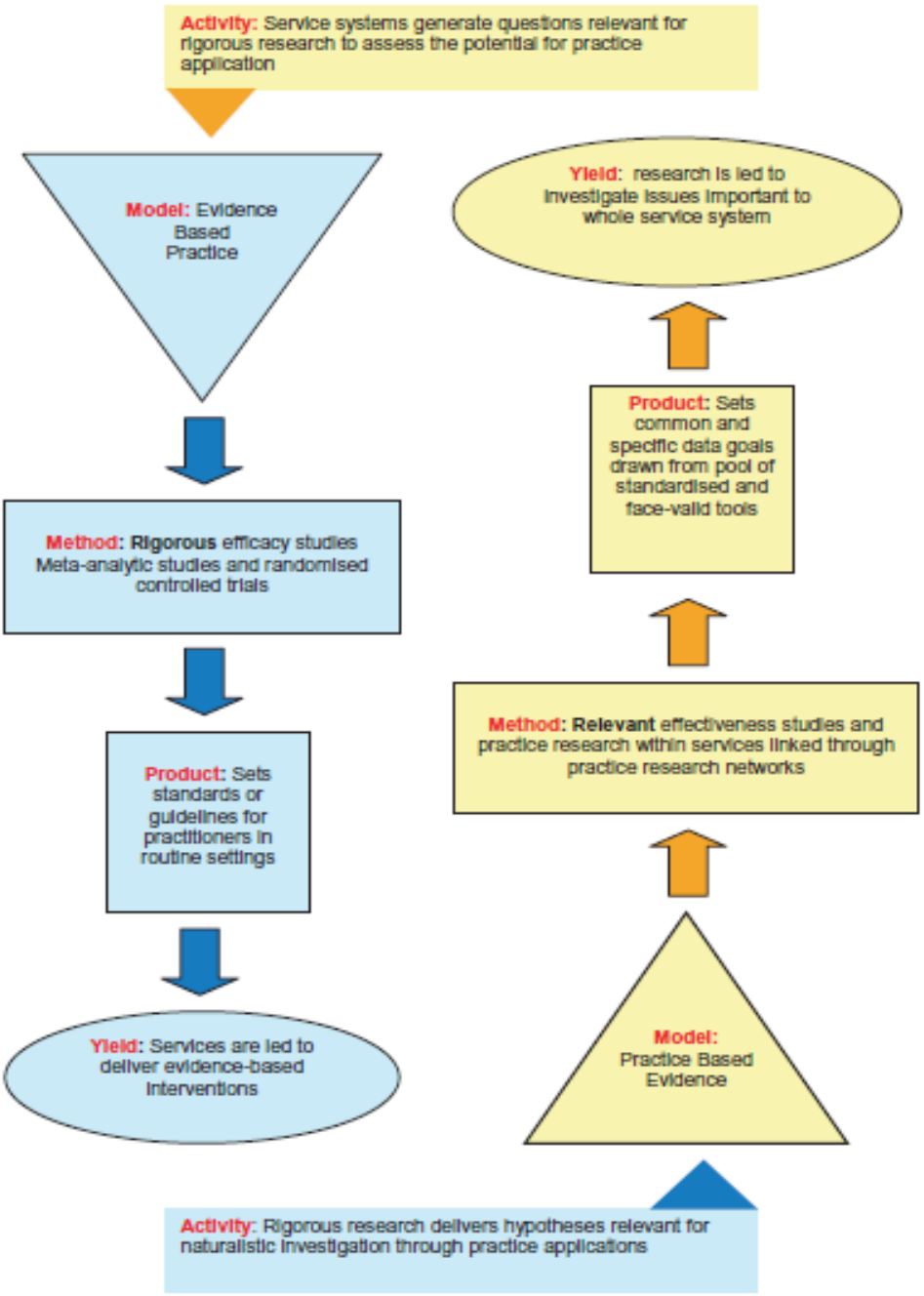

Figure 4.1 A cycle of rigorous and relevant research (Barkham & Mellor-Clark, 2003, p.324)

However, it is important to understand the differences between ‘transferring’ and ‘translating’ knowledge. According to Graham et al. (2006), knowledge transfer involves sharing ‘good ideas, research results and skills’ (p. 15) with the wider community, while translating knowledge involves ‘turning knowledge into action and encompasses the processes of both knowledge creation and knowledge application’ (p. 22). Although the former can appear to be a unidirectional process conducted by those who produce knowledge, both terms have the ultimate goal of making information accessible enough to others so that it can be implemented and used in the right settings (Graham et al., 2006). Therefore, in order for EPs to be considered real agents of change, they need to engage not only in transferring knowledge but also in translating it.

Even though there are many ways that knowledge can be transferred, such as through journal publication, Lomas (1993) suggests that there are three main methods of transferring knowledge, and these have different levels of success:

1. **Diffusion**: is mainly a passive way of communicating information and it is usually successful with an audience that is already motivated to learn or in search of new information.
2. **Dissemination**: is a more active way of communicating new information to a target audience. This includes tailoring the message in a purposeful manner with the aim of creating awareness about a given issue.
3. **Implementation**: goes beyond creating awareness and focusses on aiding the audience to see the usability of the new knowledge. Moreover, sharing the

new information includes identifying potential barriers and planning methods to overcome them so the new information is used.

Consequently, a way in which EPs can help to close the evidence to practice gap is by not only restricting themselves to disseminating knowledge (e.g. offering workshops) but also getting involved in implementing it (e.g. offering supervision). This can include a series of strategies which will help implement research findings, in terms of practice, after they have been disseminated. For example, research shows that change is more likely to occur when the dissemination of knowledge is done in an active, planned, tailored and interactive way with a targeted group (Graham et al., 2006; Gray, Sharland, Heinsch, & Schubert, 2015). The message needs to be 'user friendly', clearly justify the need for change, and make a realistic comparison between the new information and current interventions that are being used (Lomas, 1993). Another way to ensure the implementation of research findings is by allowing the exploration of the new information through a dialogue between all stakeholders involved (Dunsmuir & Kratochwill, 2013; Lomas, 1993). Personal contact and the opportunity to discuss and problem solve the practicalities of new interventions seem to be key elements needed for practitioners to be more open to consider implementing new knowledge into their practice (O'Keefe & Medway, 1997; Lomas, 1993).

In conclusion, EPs are well equipped to link the EBP and PBR frameworks through their work in the hard-to-reach environments of schools. Their knowledge of psychological and education theory, their capacity to appraise research, and their

interpersonal skills needed to adapt and share information with educators are key ingredients for closing the research to practice gap.

4.4. Positioning of Current Research

4.4.1 The current research as a contribution to EBP and PBR

The current research examined the impact that Restorative Conversations (RC) had in reducing peer conflict incidents and promoting pro-social behaviour in five primary school students. RC is a shortened version of the restorative conference from Restorative Justice (RJ) and is theoretically grounded on the values, principles and skills of RJ. Just like RJ, RC sees misbehaviour as an opportunity to educate students on the value of relationships instead of punishing them (Hopkins, 2003). In this way, students are encouraged to reflect on their behaviour, be responsible for it, restore the harm they have caused and repair the relationship(s) that have been affected (Hopkins, 2004b).

Research in whole school restorative practices (RP) – including RJ – in education has started to yield some promising evidence for supporting student behaviours that are difficult to tackle, such as: racist name calling, bullying, inter-personal conflict, victimisation, as well as reducing the number of fixed term exclusions (Moore, 2008; Stinchcomb et al., 2006; Thompson & Smith, 2011; Youth Justice Board for England and Wales, 2004). Additionally, schools that use RP consistently for more than two years have seen improvements in their school environments, such as relationships among students being more harmonious than before they began using RP (Kane et al., 2006; Youth Justice Board for England and Wales, 2004). However, there is still

limited research exploring the effectiveness of RP in schools and more is needed (Kane et al., 2006; Teasley, 2014).

Additionally, despite the initial evidence, teachers have found that a formal restorative conference can be a long and time-consuming process which is hard to fit into the busy school day (Bartkowiak-theron, 2012). Also, teachers need to be fully trained in order to become independent and competent restorative practitioners. For this reason, the current research aimed to explore the use of an abridged version of the RJ conference as a more manageable intervention for teachers to use.

Firstly, as a form of PBR, the current research offered schools an intervention that was mindful of teachers' workloads and practical barriers for implementation and still preserved the richness of RJ. Secondly, the external and ecological validity of the intervention were considered as the study was done in collaboration with students and teachers. This increased the likelihood of identifying strengths and areas of development for the future improvement of the intervention (Epstein, 2009; Green, 2008). Lastly, this study was respectful of teachers' previous experiences and knowledge by inviting them to use some of the skills they already had, while being supported and encouraged to preserve the fidelity of the intervention. This made the study a participatory exchange between the researcher and the teachers (Green, 2008).

In addition, the current study is the first among the RJ research to use a single case design (SCD) with a multiple baseline to explore the effectiveness of the intervention. This study was systematically carried out and adhered closely to SCD

guidelines (Horner et al., 2005; Kratochwill & Levin, 2010; Kratochwill & Shernoff, 2003). Firstly, its results have been objectively appraised and looked at by using complementary types of analysis, such as visual and statistical analysis (Harrington, 2013; Kennedy, 2005). Secondly, by calculating effect sizes the researcher was able to objectively measure the impact of the intervention on the intended outcomes (peer conflict and pro-social behaviour) (Parker et al., 2011). Thirdly, this study also used two questionnaires to measure emotional literacy and pro-social behaviour as well as the observation of students' behaviour. Lastly, the recruitment of participants was triangulated by considering students' and teachers' perceptions of potential participants. By adopting this multi-source approach to data collection and data analysis, this study could also be considered to be an example of EBP, thus becoming an example of how theory and practice can be combined and contribute to one another.

4.4.2 Academic, Professional and Social Implications of this research

As this study could be considered to be making a contribution to EBP and PBR, as stated in the section above, it has implications across academic, professional and social domains. First, academically this study shows how SCD studies can enrich and expand the pool of evidence that RCTs give to EBP (Kratochwill, 2007), and how compatible they are with PBR due to their focus on individuals, and their practical implementation in realistic settings (Kratochwill et al., 2012). This study also has the potential to feed into the already existing pool of evidence of the potential benefits that restorative approaches have in different areas of student behaviour (Kane et al.,

2006; Moore, 2008; Stinchcomb, Bazemore, & Riestenberg, 2006; Thompson & Smith, 2011; Youth Justice Board for England and Wales, 2004).

Second, this study provides EPs with an alternative behavioural tool to use when advising schools about the behaviour management of students who get involved in peer conflict. Also, this study has the potential to influence the organisational environment of schools, so EPs have the opportunity to suggest the adoption of a more complete behaviour management framework such as RJ or other restorative approaches to deal with more serious issues.

Third, this study has the potential to influence teachers' practices as it directly challenges traditional behaviour management methods, such as 'zero tolerance' and permanent exclusions. In addition, despite the study's limitations in term of statistically significant outcomes (only two results were found to be significant), it has shown that in a small amount of time students' behaviour can start showing a clear pattern of reduction in terms of peer conflict incidents. This, in turn, could inform behavioural policy practice at primary school level.

Finally, this study has found that, unlike most interventions designed using a scientific method (Wigelsworth et al., 2012), restorative conversations can be implemented with a high level of fidelity when a well-delivered training workshop is given to teachers so they know how to implement it, and when EP support is offered at the initial stages of intervention implementation.

4.5 Dissemination Strategy and Evaluation of Impact

This section will provide an outline of the aims for the dissemination strategy, the key stakeholders that would benefit from this information, the pathways to impact of the findings, and the approximate time for dissemination of the empirical and review papers.

4.5.1 Aims

According to the Education Endowment Foundation, it is important for schools to spend their money on interventions which will 'lead to the biggest possible increase in pupils' learning' (Higgins, Kokotsaki, & Coe, 2012, p.3). In other words, schools should be paying for interventions that are research-based. Consequently, the aims for this dissemination strategy are:

a) Share up-to-date information with the right stakeholders.
b) Help expand the knowledge about the practical implementation of Restorative Justice interventions in school settings.
c) Draw attention to alternative methods of dealing with students' misbehaviour and the importance for a change in perspective in this area.
d) Contribute to the translation of knowledge between research findings and end-users.

4.5.2 Key Stakeholders

To complement the previous definition of 'dissemination' given in this chapter, the dissemination strategy for this study aims to transmit the information found in these studies (about EL and RC) through various channels of communication with

the hope of reaching various audiences (Kanouse, Kallich, & Kahan, 1995). In order to do this, it is necessary to identify the stakeholders that would benefit from this study's findings. This will help the researcher consider and adapt the written and spoken language used to describe the research, in order to create the right effect to aid understanding and encourage the adoption and use of the research findings. Table 4.1 shows a list of possible specialist and non-specialist stakeholders and the reasons for reaching them.

Table 4.1 Specialist and Non-specialist stakeholders

	Stakeholders	Reasons
Academic (Specialist)	Scientific Journals	* To expand the understanding in restorative interventions and EL in schools.
	Secretariat of Higher Education, Science, Technology and Innovation (SENESCYT) in Ecuador	* To raise awareness of the need of using alternative behavioural methods with students.
	Researchers	* To foster more research in the area of restorative interventions in schools.
	International Institute for Restorative Practices	* To encourage the use of SCD methods in EBP.

	Transforming Conflict: National Centre for Restorative Approaches in Youth settings	* To support PBR as a way of complementing EBP. * To help close the research to practice gap in this area.
Professional (Specialist)	Educational Psychologists	* To encourage professionals the daily use of the six restorative questions when minor incidents occur.
	School practitioners in England and Ecuador (e.g. Head teachers, SENCOs, teachers, TAs, etc.)	* To promote a different view of misbehaviour in the sense of caring for relationships instead of rules. * To raise awareness of whole school restorative approaches. * To increase the knowledge and understanding of what professionals already know on EL interventions in schools.
Social (Non-specialist) **(in England and Ecuador)**	Students and Parents	* To share with students and parents the new information on restorative interventions and EL interventions, so they are able to get involve in its delivery.

	* To promote a different view of behaviour and EL skills, so students and their families can participate in being part of a bigger change in these areas.

4.5.3 Pathways to impact

According to Levin (2004), one way to evaluate the impact of research is by judging whether its findings 'make a difference to subsequent actions that people take or refrain from taking' (p.2). This is exactly the aim of this dissemination strategy: to see real and practical changes in the way that the stakeholders manage behaviour at the student level and teach EL skills in schools. With this is mind and being mindful of the diverse audience that this message intends to reach, the dissemination process will focus on either one or all of the following elements:

a) Expanding the stakeholders' knowledge, b) changing their attitudes or beliefs (persuasion), c) guiding their decision-making process, d) helping them to correctly implement interventions, and e) inspiring new research (Rogers, 1995). This dissemination process will be guided by Lomas' (1993) description of 'dissemination and implementation' strategies mentioned in previous sections. Thus, the activities that will be carried out to fulfil these objectives are:

1. *Journal Publications*

Journal articles are still one of the most common ways to reach academic and professional audiences such as researchers, EPs, university tutors and students, and

educational institutions. For this reason, the following parts of this thesis will be converted into scientific articles: Chapter 2 - Systematic Literature Review on the Effectiveness of Emotional Literacy (EL) Interventions on the Development of Students' EL Skills; and Chapter 3: The Exploration of the Impact that Restorative Conversation has in Reducing Peer Conflict Incidents and Promoting Pro-Social Behaviour. Please refer to Appendices 1 and 2 to see the title and abstract for publication of each paper.

The articles will be prepared by the researcher as first author with the support of her supervisor, Dr Ben Hayes, who will offer advice during the publication process and will act as a second author.

For the publication of this thesis' systematic literature review on EL skills, the following journals have been identified as being relevant (with impact factors in brackets):

- Child Development ([1]3.79)
- School Psychology International ([2]2.06)
- The British Journal of Educational Psychology ([1]2.0)
- Educational Psychology ([1]1.16)
- Research Papers in Education ([2]1.06)

These journals have been identified on the basis that:

[1] This values was obtained from the Journal's homepage.
[2] This value was obtained from ResearchGate.net. The data is based on average citation counts from work published in this journal. The data used in the calculation may not be exhaustive.

- Their publications focus on students' emotional and mental well-being.
- All their literature is concerned with the understanding and improvement of education.
- They accept studies with a variety of design methodologies.

For the publication of this thesis' empirical paper on Restorative Conversation, the following journals have been identified as being relevant (with impact factors in brackets):

- Journal of Community & Applied Social Psychology ([2]1.57)
- [3]Restorative Justice - An International Journal
- [3]Internet Journal of Restorative Justice (IJRJ)
- Educational Psychology: An International Journal of Experimental Educational Psychology ([1]1.16)
- [3]The International Institute for Restorative Practices (IIRP)
- Educational Psychology in Practice ([2]0.42)

These journals have been identified on the basis of:

- Their strong focus on literature related to Restorative Justice or Restorative approaches in schools.
- Their interest in social behaviour in the context of community problems.
- Their varied target audience, such as researchers, practitioners and lay members of society.

[3] This information could not be found.

- Their acceptance of studies involving a variety of design methodologies.

It is important to mention that eventually both papers will be translated into Spanish for the researcher to be able to share this information with educational institutions, professionals and lay audiences in her home country of Ecuador.

2. *Sharing findings with organisations interested in the development of Restorative Approaches in schools*

Being aware of the difficulties of research publication, such as the high rejection rate of many journals, as well as the potentially long time period between the production of a piece of research and the publication of that research (Weingarten, Garb, Blumenthal, Boren, et al., 2000; Balas & Boren, 2000), and the possibility that even once published a piece of research may not be accessible to practitioners (Levin, 2004), the researcher has decided to offer the findings of the empirical paper to institutions who are committed in their work to expand restorative practices in schools settings. For example, institutions such as:

- International Institute for Restorative Practices
- Restorative Justice Council
- Centre for Restorative Process
- Transforming Conflict: National Centre for Restorative Approaches in Youth Settings
- Restorative Justice 4 Schools

The researcher will send an email to these institutions offering a lay summary of the empirical paper's study and its findings. This summary could be adapted into a

blog or a magazine letter for the wider diffusion of the information into a more up-to-date channel, such as by being posted online. For an example of the summary please refer to Appendix Q.

3. Presentations, training and workshops

Research still shows that 'face to face contact remains vital in building trust and interest' (p.15) between practitioners and creating future links among professionals (Levin, 2004). Consequently, the researcher will aim to get involved in different types of training opportunities, such as sharing the study's findings with other EPs at service days at her EPS and at conferences like the 'Emotional Wellbeing in Schools – Buckinghamshire County Council' which the researcher has already participated in and has been invited to present at again, and running training days at local schools both in England and Ecuador. For this reason, the researcher will make engaging presentations to encourage audience participation during presentations.

4.5.4 Measuring the research impact

Every dissemination activity will have an impact evaluation strategy. For example, for publicising the research in journals, the outcome measure will be acceptance of either the review paper or the empirical papers in one of the mentioned journals and the number of citations of each article over time (impact factor). For the information sharing with restorative organisations, the outcome measure will be the number of requests for the lay summary and the number of actual publications online on these organisations' websites. Lastly, for the presentations and workshops, the

outcome measure will be participants' feedback on the usability of the intervention and the level of interest for a possible implementation of the intervention.

4.5.5 Dissemination Timeline

Due to the researcher's commitment of returning to her home country to work and the need for findings to be translated into her native language Spanish, it is difficult to provide an exact timeline for the dissemination of her research findings. However, for publication of these findings in English, the researcher will aim to draft the two articles and start contacting academic journals by the summer of 2019. Alongside this, the lay summary will be offered to the different organisations by the end of 2018 and schools in both England and Ecuador will be offered training and workshops in RC when it is felt that they would benefit from this.

Lastly, as this study and the Doctorate in Educational and Child Psychology have been funded by the Ecuadorian government, it would seem reasonable to request an opportunity to share these findings and the theory of RJ with primary and secondary schools from my funding body.

It would be a privilege to spread the values and principles of RJ and/or RC as an alternative method to managing pupils' behaviour instead of the punitive methods that some Ecuadorian schools still implement. This would also give me the opportunity to speak directly with teachers and parents about the benefits of talking to children when they have misbehaved, instead of simply condemning bad behaviour.

4.6 Conclusion

Despite the significant contribution that the EBP movement has made in the past 20 years in fields like medicine, agriculture and technology, it is clear that its scientific robustness has not been enough to narrow the gap between research and practice in less predictable fields such as education and psychology. As a result, a more flexible approach that allows co-participation between those involved in research and those who benefit from its results in real-life settings, is necessary. PBR seems able to strengthen and complement the EBP framework by putting more emphasis on the validity and usability of the interventions explored and allowing the beneficiaries to take part and feed onto the practicalities of the interventions' implementation.

The current study has been presented as an illustration of both approaches and as an example of how scientific research can be enriched by collaboration between education practitioners and researchers. However, research is of little use unless potential users are aware of its existence, and are interested to look for it and know how to make use of its findings. Therefore, researchers have an ethical responsibility to disseminate, 'translate' and aid in the implementation of any new research into practice as this could bring about significant change into the lives of students.

Consequently, this chapter has outlined the strategy to disseminate and 'translate' two scientific articles from this thesis to different audiences starting with fellow researchers and EPs, and extending to practitioners in schools. The strategy has attempted to deal with some of the common complaints about research in

education (Levin, 2004), in the sense that both topics (EL skills and behaviour) are of current and constant concern among educators and parents. The design and methodological procedure are of a strong quality, and the findings are accurate and presented in an objective manner.

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Appendices

Appendix A: Summary of included studies (Mapping the field)

Study and Aim	Locale	Sample	Design	Intervention	Relevant Measures	Primary Outcomes & Findings in relation to relevant measures
Brackett et al. (2012) To test the impact of a SEL curriculum on students' academic performance and SE competence.	USA	273 5th and 6th grade students from White, Black, Hispanic and Asian background from the area of Long Island in NY. Intervention Group (IG): 155 Control Group (CG): 118	Pilot Study A pre-post quasi-experimental block design (between-participants). Schools were assigned randomly to either the IG or CG but the analysis was done at the student level hence it can be considered a quasi-experimental design. Both the IG and CG were screened to check their level of EL. Wait list control group.	**RULER Feeling Words Curriculum:** a multi-year programme designed to promote social, emotional, and academic learning with lessons centred in feeling words and related concepts.	**Behavioural Assessment System for Children (BASC):** teacher's reports only. Reliability (alpha) for this sample for pre-post reports respectively: Externalizing: α = .77 α = .79 Internalizing: α = .69 α =.72 School problems: α = .91 α = .89 Adaptability; α = .90 α = .92	**Social and emotional competence** A *paired sample t-test* found that the IG had significantly higher adaptability scores and significantly lower school problems scores at post-test, respectively. Fs(1,244) = 7.66 and 9.34, p = .006 and .002 Partial η^2 = .05 and .04

			No significant differences were found between the CG and the IG in terms of ethnicity and gender.			
Clarke, Bunting & Barry (2014) To evaluate the immediate and long term impact of the programme on students' EL and behavioural outcomes.	Ireland and UK	766 students (7 – 8 years of age) from disadvantaged schools Intervention Group (IG): a. 267 b. 277 Control Group (CG): 222	Pilot Study A pre-post randomised hierarchical design. Schools were randomly assigned to either the IG I or IG II or CG. No intervention control group. No significant differences were found between the CG and the IG in terms of gender, school location (rural or urban) and multigrade class.	**Zippy's Friends programme**: is a universal school-based programme for children aged between 5 and 8 years. It is designed to promote the mental health and emotional well-being of all young children by increasing their repertoire of coping skills and by stimulating varied and flexible ways of coping with problems of day-to-day life.	**Emotional Literacy Checklist:** self-awareness, self-regulation, motivation, empathy and social skills. Internal consistency for this study α = .91. **Strengths and Difficulties Questionnaire**: measures children's (age 4–16 years) emotional and behavioural functioning (emotional symptoms, conduct problems, hyperactivity/ inattention, peer relationship problems and prosocial behaviour). Internal consistency for this study α = .76	A *Hierarchical Regression* found a post-intervention significant direct effect of the programme on the intervention group's emotional literacy skills: Self-awareness: [(Estimate = 0.39, SE = 0.057, C.R. = 6.875, p<0.001), Std Est = 0.351] *SMD = .38 Self-regulation: [(Estimate = 0.220, SE = 0.083, C.R. = 2.66, p<0.01); Std Est = 0.122] *SMD = .26 Motivation: [(Estimate = 0.215, SE = 0.058, C.R. = 3.691, p<0.001), Std Est = 0.133] *SMD = .44

Social Skills score [(Estimate = 0.215, SE = 0.058,
C.R. = 3.691, p<0.001), Std Est = 0.124].

*SMD = .18

There was no significant main effect for Empathy (p = .229). Neither on the IG's emotional symptoms (SDQ scores).

12 months *Follow up* revealed a similar pattern:

Self-awareness
[(Estimate = 0.155, SE = 0.049,
C.R. = 3.186, P<0.01), Std Est = 0.142];

*SMD = .23

Self-regulation
[(Estimate = 0.107, SE = 0.048,
C.R. = 2.211, P<0.05), Std Est = 0.059]

*SMD = -.02
Motivation
[(Estimate = 0.094, SE = 0.036,
C.R.= 2.587, P<0.01), Std Est = 0.054]
*SMD = .27

						Social Skills scores [(Estimate = 0.094, SE = 0.036, C.R. = 2.587, P<0.01), Std Est = 0.05]. *SMD = -.09 The programme had not immediate or delayed impact on the subscale of Empathy, nor on the emotional and behavioural problems of the intervention group (p = .19). However, the control group showed significant decrease in their conduct problems scores between pre-post intervention compared to the intervention group.
Domitrovich, Cortes & Greenberg (2007) To evaluate the effectiveness of an adaptation of the PATHS curriculum for pre-school children.	USA	20 classrooms (approx. 275 children) disadvantaged pre-school children (mean age: 5 yrs.) from multi-ethnic background. No information was given on the distribution of children to the Intervention	A quasi-experimental pre-post test block design (between-participants) at building level. Wait list control group. There were very few differences between the two groups. The CG was slightly	**Promoting Alternative Thinking Strategies curriculum (PATHS)**: is a universal, teacher-taught social-emotional curriculum that is designed to prevent or reduce behaviour and emotional problems in	**Recognition of Emotion Concepts subtest from the Kusche Emotional Inventory (KEI):** to assess their receptive emotion vocabulary. Cronbach's α = .75 at pre-test and .81 at post-test. **Assessment of Children's Emotions Scales (ACES):** to assess their emotion expression knowledge and to	An *ANCOVA* (controlling for verbal ability and family demographics) found a significant group effect on the KEI $F(8, 166) = 8.86$, $p<.01$; and the ACES accuracy score $F(8, 163) = 5.59$, $p<.05$. Adjusted means showed that children who were exposed to PATHS had a larger emotion receptive vocabulary at post-test compared to the CG and were more accurate in identifying feelings. In addition, the intervention also seemed to significantly reduce children's anger attribution bias.

		Group (IG) and Control Group (CG).	older and more likely to have a disability. There were also more minority children in the CG who were not identified as African-American.	young children and enhance children's social emotional competence.	determine whether they exhibited any anger bias. Cronbach's α = .59 **Head- Start Competence Scale Parent-report:** is a measure of children's social and emotional skills that reflects interpersonal relationships and emotion regulation. It is designed to be more sensitive than traditional measures of social competence and was developed specifically for this evaluation. Cronbach's α = .74	The IG had significantly lower anger attribution bias scores at post-test compared to the CG $F(8, 163) = 6.71$, $p < .01$. Total KEI d = .36 ACES Emotion expression d = .37 ACES anger bias d = -.40 The *ANCOVA* using parent ratings of child behaviour also found significant group effects on the total score of the Head Start Competence Scale, $F(7, 181) = 7.82$, $p < .01$. The adjusted means indicated that parents of the IG described their children as significantly more socially and emotionally competent than did parents of the CG. d = .36
Eodanable & Lauchlan (2011) To test the efficacy of the '*Creating Confident*	UK	48 armed forces primary 5 (9-10 yrs.) and primary 6 (10-11 yrs.) children.	Quasi-experimental design (one group pre-post test)	**Creating Confident Kids (CCK) curriculum:** an EL curriculum for P5 and P6 pupils.	**Emotional Literacy Checklist (Faupel, 2003)** Reliability (alpha) for this sample: .76	*Paired sample t-tests* were conducted to investigate whether there were any pre to post-differences in P5 and P6 pupils' overall EL scores following CCK. **No significant differences were found.**

Kids' (CCK) curriculum and the *Seasons for Growth* (SfG) small group intervention.		Intervention group (IG): 48 Seasons for Growth group: 4 Mixed socio-economic background		**Seasons for Growth:** an educational programme addressing concepts such as: loss, grief and change.	Students' evaluations and teachers interview. No reliability was provided.	75% of 28 responses from 4 students were answered positively, suggesting a positive recognition of feelings and coping strategies as a result of the SfG programme.
Haynes (2014) To determine the effect of RULER on conflict resolution skills by including emotion regulation as a mediator.	USA	754 fifth & sixth grade students from 45 schools in the Diocese of Brooklyn and Queens, NY.	Randomised nested design (students were nested within schools)	**RULER:** approach to social and emotional learning that seeks to improve the quality of classroom interactions through professional development and incorporating EI into the classroom.	**Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (4th subscale):** emotion regulation. Reliability (alpha) = .96	A *Multi-level mediation analysis* found **no significant effects of *time x condition*** were found Ruler on conflict resolution or emotion regulation. Therefore, there was no mediation of emotion regulation between RULER and conflict resolution skills.
Humphrey et al. (2010)a To evaluate the effectiveness of the 'Going	England	22 schools across England, 182 students from 6-11 years old. There were 128 children who	A quasi-experimental pre-post control	**Going for Goals:** is a short-targeted intervention developed as part of the primary social	**Emotional Literacy Assessment and Intervention Checklist (ELAI):** self-awareness, self-regulation, motivation, empathy and social skills.	After partialling out scores for T1 and only for **'extra support children'** an *ANCOVA* found that: *ELAI Child ratings:* a marginal main effect of group was found

for Goals' targeted intervention. It is one of the SEAL curriculum topics.		were selected for extra support and 54 as role models. Intervention Group (IG): 102 Control Group (CG): 80		and emotional aspects of learning (SEAL) programme in England.	Manual's α = .70 to .82 for the Teacher version **Strengths and Difficulties Questionnaire**: measures children's (age 4–16 years) emotional and behavioural functioning (emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour). No information on reliability was provided.	[F(1,128) = 3.63, p = 0.059, η2 = 0.03]. d = .05 *ELAI Staff ratings:* a marginal main effect of group was found [F(1,117) = 3.697, p = 0.057, η2 = 0.03]. d = .29 *ELAI parents ratings:* no significant changes were found. *SDQ staff ratings:* main effect of group was found [F(1,119) = 7.187, p < 0.01, η2 = 0.06]. d = .32 *SDQ parents ratings:* no significant changes were found. **Follow up** (7 weeks after): no significant differences were found between T2 and T3. Consequently, the intervention's impact was sustained.
Humphrey et al. (2010) To evaluate the	UK	253 primary school students (6-11 years old).	A pre-post test quasi-experimental block design	**New Beginning:** is a short-targeted intervention developed from	**Emotional Literacy Assessment and Intervention (ELAI)** - child self-report, teacher and parent report: it is	A mixed *ANOVA* revealed a significant three way interaction of group x role x time on students' self-report data [*F*(1,251) = 4.517,

effectiveness of a short social-emotional intervention in children's social-emotional competence and mental health difficulties.	They were selected to be part of the intervention. One group to be the 'role model' (i.e. children who are socially confident, well behaved and typically high-achieving) and children who are thought to be at risk of developing SE problems.	(between-participants). Children had been pre-selected by the schools therefore some of them were part of the 'extra support participants' and others of the 'role model' participants. Each IG and CG had a mix of both. Wait list comparison group. No significant differences were found between the CG and the IG in terms of sex, age, ratio of extra support and all pre-test dependent variables.	the SEAL curriculum.	based on an EI framework and provides indices of self-awareness, self-regulation, motivation, empathy, and social skills. Internal Reliability (alpha) for this sample for all the versions used in the different subscales ranged from .77 to .94	$p < .05$, $\eta 2 = 0.018$]. Only the extra support participants in the IG increased in their social and emotional competence scores at post time. However, the *ANOVA* did not find a significant effect of group x time. No significant effects were found in the teacher or parental data. No significant effects were found in the **Follow up**.

Knowler & Frederickson (2013) To evaluate a small group EL intervention in reducing bullying behaviour.	UK	50 primary school students (8-9 years old) Intervention Group (IG): 22 Control Group (CG): 23 The students were peer selected using a bullying measure.	Pilot Study A pre-post test randomised block design (between-participants). Schools were assigned randomly to either the IG or CG. Wait list control group. The groups were found equivalent across a range of demographic variables: gender, ethnic group, attainment in English and Mathematics.	**A small group EL intervention** that aim to develop: self-awareness, self-regulation, empathy, and social skills.	**Emotional Literacy Assessment-Pupil Form (ELA-PF):** it was used to screen students with high and low EL. Reliability (alpha) for this group: .63 **Trait Emotional Intelligence Questionnaire-Child Form (TEIQue-CF):** adaptability, affective disposition, emotion expression, emotion perception, emotion regulation, low impulsivity, peer relations, self-esteem and self-motivation. Reliability (alpha) for this study: .79	A 2 (groups) x 2 (time) *ANOVA* was performed. There was a significant main effect of EL category, $F(1, 34) = 25.00$, $p = .000$, $\eta^2p = .42$, but no significant effect was found for the intervention group or time: $F(1, 34) = 0.42$, $p = .52$, $\eta^2p = .01$ Nor time: $F(1, 34) = 2.86$, $p = .10$, $\eta^2p = .08$. This result shows that children in the high EL category consistently score higher on the TEIQue-CF than children in the low EL category. However, the intervention did not have an effect on EL.
Lewis et al. (2016) To evaluate the effects of PA on indicators of	USA	14 matched-pair public schools from Chicago. Approximately 1170 students	Longitudinal study Randomized block design between subjects	**Positive Action (PA):** is a school based social-emotional and character development program.	**Social-Emotional and Character Development Scale (SECDS):** self-control Reliability was not provided.	A *Multi-Level Growth Model Analysis* found a **significant time-by-condition effect between IG and the CG.

positive youth development (PYD).	from low income background. Students from kindergarten to 6th and 8th grade participated.		**Children's Empathic Attitudes Questionnaire:** empathy Reliability was not provided. **The Social Skills Problem Solving Measure:** five of the eight scenarios were used. The authors computed scores to represent aggressive or competent social problem solving responses. Reliability was not provided.	Students in the IG group showed *less* decline in self-control and empathy skills than the CG (Cox's d = .50 and .26 respectively) Students in the IG group showed *less increase* on the measure of aggressive problem solving than the CG (Cox's d = -.76) Students in the IG group showed marginally significant *increase* in competent social problem solving response (Cox's d = .05).

Nix et al. (2013) To test the model that improving social and emotional skills as well as language/emergent literacy skills will promote cross-domain academic and behavioural adjustment for children transitioning into kindergarten.	**USA**	356 preschool children (4 years old) from Hispanic and African background, from very disadvantaged areas. No information about the number of children who formed the IG or CG was given.	An early stage program. A pre-post test randomised block design (between-participants). Classrooms were stratified on location, length of program day, and student demographic characteristics. No intervention control group. No significant differences were found between the CG and the IG at baseline.	**Research Developmentally Informed (REDI):** has the goal of enhancing children's acquisition of language/emergent literacy skills and social-emotional skills.	**Assessment of Children's Emotions Skills**: recognition of different facial expressions. Reliability (alpha): .57 **Emotion Recognition Questionnaire**: identify feelings to pictures of different feelings. Reliability (alpha): .68	A *simple t-test* found a significant difference between IG and CG in emotion understanding (all the residualised gain scores were standardised) $\beta = .36$, $p < .01$. In the **Follow up**, emotion understanding was found significant for the IG and one of the unique predictors of reading achievement ($\beta = .20$, $p < .001$) and learning achievement ($\beta = .11$, $p < .05$) in kindergarten.
Qualter et al. (2007) To evaluate whether an EI programme can develop students' EI competencies and ease the negative effects of transition.	UK	380 Year 7 cohorts (11-12 years old). Intervention Group (IG): 170 Control Group (CG): 169	A quasi-experimental pre-post test block design (between-participants). Different cohorts were assigned to either the IG or CG. No intervention control group.	**EI programme** which focused on transition, socio-emotional skills such as: relationships, bullying, caring for others, personal/family problems and self-esteem.	**The BarOn Emotional Quotient Inventory: Youth Version:** it was used to screen and divide students with high, average and low EI. It measures: interpersonal; intrapersonal; stress management;	A 2 (groups) x 2 (time) x 3 (base line EI scores) *ANCOVA* was performed. General ability (Raven's scores) was controlled. A significant post-test difference between the EI groups was

			No significant differences were found between the IG and the CG in terms of ability: cognitive and CAT measures. Also in terms of teachers' evaluation of internal or external behaviour.		adaptability and general mood. It produces a total EQ score. Reliability was not provided.	found F(1, 320) = 13.10, $p < .001$. However, only the high and low EI groups' scores were significant at post-test. The low EI intervention group made significant progress from Time 1 to Time 2, the high EI group experienced a significant reduction in their EI level across time. SMD = 2.18
Webster-Stratton, Reid & Stoolmiller (2008) To evaluate the Incredible Years Teacher and Child Training programme in high-risk schools	USA	1768 students from pre-schools, kindergartens and year 1. Intervention and Control numbers were not specified. All participating schools served a diverse low-income and	A randomized block design (between-participants). Intervention and Control schools were matched on low Social Economic Status.	**Dina Dinosaur Social Skills and Problem Solving School Curriculum:** designed to promote children's social competence, emotional self-regulation (e.g., engagement with classroom activities, persistence, problem solving, anger control), and school behaviour (e.g., following teacher	**Multiple Option Observation System for Experimental Studies (MOOSES):** it measures several variables but two variables measured emotional self-regulation: a) percentage of time child disengaged/off-task	A *Multi-level analysis* showed that none of the 6 child **MOOSES** constructs showed significant main effects of intervention. However, **child conduct problems** showed significant negative correlations at the teacher and student level. For child conduct problems, the

	multi-ethnic population.	directions, cooperation). (This intervention also included the teaching of managing classroom skills but this has not been analysed in this review).	from classroom activities and (b) percentage of time in solitary play. Inter-rater reliability obtained by intraclass correlations: Child disengage = .88 Solitary play = .94 **School Readiness and Conduct Problems: Coder Observation of Adaptation – Revised (COCA-R):** it measures children's emotional self-regulation skills (e.g., concentration, controls temper, expresses feelings appropriately, eagerness to learn, cooperation, task completion, can calm down, and distractibility); social skills (e.g., being friendly, helping others,	intervention effect first became significant at $p < .05$ at 1.42 standard deviations above the pre score mean with an effect size of - .70. At 2 standard deviations above the pre score mean the effect size was -1.10. **Child disengagement** also showed significant negative correlation at the teacher level. For child disengagement, the intervention effect first became significant at $p < .05$ at .20 standard deviations above the pre-score mean with an effect size of -.29. At 2 standard deviations above the pre score mean the effect size was -1.65.

	giving compliments, not bossy with suggestions, liked by classmates, initiating peer interactions); and conduct problems (aggression, noncompliance, teasing, and destructive behaviour). Internal consistency: $\alpha = .92$ Inter-rater reliability: ICC = .80 *(Lower scores on this measure indicate better school adjustment)* **Wally Problem Solving and Feelings Tests:** it measures children's problem-solving	Both findings indicate that the higher the initial average child conduct problems for a teacher, the more improvement in average child scores at the post-test. For child conduct problems, also could mean that those children with higher baseline conduct problems showed more improvement at post-test. --- A *Multi-level Analysis* with the **COCA-R** measure show that there were significant individual differences in students outcomes at the teacher level. A **Follow up** analysis revealed that the intervention effect was significant at the .05 level on students' initial status. Effect

		skills or solutions in response to hypothetical problem situations; and children's feelings language. ICC reliability for number of different positive strategies was ICC = .93 and for different negative strategies was ICC = .71. This measure was only completed with a small sub-group of children who were considered to be moderate to high-risk of developing behaviour problems.	size of -. 82 and going down to an effect size of -2.87 at 2 standard deviations above the pre score mean. Thus, the intervention had a large impact on average student scores for teachers with students with average levels of poor school readiness and a very large impact on average student scores for teachers with students with very poor initial levels of school readiness. ---------- A *Mixed-design ANOVA* (time by condition) was used to evaluate the **Wally Problem Solving and Feelings Tests.** Children in the IG showed significantly greater improvement than the CG on the number of different positive

						strategies generated; $F(1,214) = 9.27$, $p < .01$, $\eta^2 = 041$. Also the IG showed significantly greater improvement than the CG in the number of positive feelings that they could identify; $F(1,52) = 8.58$, $p < .01$, $\eta^2 = .14$.
Wigelsworth, Humphrey & Lendrum (2012) To evaluate the effectiveness of the secondary school version of the SEAL programme in social-emotional skills, better behaviour and mental health difficulties.	UK	41 secondary schools (approx. 4351 students) Intervention Group (IG): 22 schools (2360 students) Control Group (CG): 19 schools (1991 students)	A longitudinal study (2 years period) A pre-post test quasi-experimental block design (between-participants). Schools were allocated from an initial wave of SEAL.	**Secondary SEAL:** is a comprehensive approach to promoting the social and emotional skills that underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools.	**Emotional Literacy Assessment and Intervention (ELAI):** it is designed to assess pupils' emotional skills (self-awareness, self-regulation, motivation, empathy, and social skills). Cronbach's alpha for the self-report version: .75.	After controlling for a range of school- and pupil-level characteristics, analysis using *Multi-Level Modelling* indicated marginal, **non-significant effects of the SEAL programme** on pupils' social and emotional skills ($\beta 0j = .494$, $p = .07$), mental health difficulties ($\beta\ 0j = -.298$, $p = .05$), and **no significant effect on their pro-social behaviour** ($\beta\ 0j = -.047$, $p = .25$).

*These effect sizes have been manually done by the author of this review following Morris (2008) formula.
**The authors of this study did not report the p-values for these outcomes but only mentioned they were ‘statistically significant’.

Appendix B: Weight of Evidence

Weight of Evidence A – Methodological Quality

The Task Force on Evidence-Based Interventions in School of Psychology Coding Protocol was used to weight all the studies on their quality of methodology (Kratochwill, 2003). The scores from Measures and Comparison group were transferred from the coding protocol but the Statistical analysis criteria is described below.

Statistical Analysis

Weight of evidence	Description
High	Appropriate statistical analysis includes all of the following: 1. Appropriate unit of analysis i.e. students 2. Familywise error rate controlled 3. Sufficiently Large N*
Medium	Appropriate statistical analysis includes two of the following: 1. Appropriate unit of analysis 2. Familywise error rate controlled 3. Sufficiently Large N*
Low	Appropriate statistical analysis includes one of the following: 1. Appropriate unit of analysis 2. Familywise error rate controlled 3. Sufficiently Large N*
Zero	Appropriate statistical analysis does NOT include ANY of the following: 1. Appropriate unit of analysis 2. Familywise error rate controlled 3. Sufficiently Large N*

*Sufficiently large N was judged according to the criteria for a 2 group Analysis of Variance (ANOVA) or a Multiple Regression with 2 independent variables (this analysis depended on each study's design) as given by Cohen (1992). Based on a medium effect size according to Cohen's d parameters indicating an alpha level of .05 and a sample size of 64 participants in the control and experimental group for ANOVA. This would result in a power level of 80% (Cohen, 1988). For Multilevel Modelling more than 20 groups at macro level (i.e. schools) was considered appropriate (Kreft & de Leeuw, 1998).

Understanding the scores equivalences (they apply to all weight of evidences):

Evidence	Scores equivalences	Average scores
Strong	High	2 - 3
Promising	Medium	1 – 1.99
Weak	Low	0 - .99
No/limited evidence	Zero	0

The table below indicates the overall weight of evidence for methodological quality (WoE A) of all the 13 studies:

Weighting Scores				
Studies	**Measures**	**Comparison Group**	**Statistical Analysis**	***Overall Methodological Quality**
Brackett et al. (2012)	1	2	2	1.7
Clarke, Bunting & Barry (2014)	1	2	2	1.7
Domitrovich, Cortes & Greenberg (2007)	3	2	2	2.3
Eodanable & Lauchlan (2011)	2	0	1	1
Haynes (2014)	2	2	3	2.3
Humphrey, Kalambouka, Wigelsworth, & Lendrum (2010)	2	1	3	2
Humphrey et al. (2010)	2	1	2	1.7
Knowler & Frederickson (2013)	1	2	1	1.3
Lewis et al. (2016)	0	1	3	1.3
Nix et al. (2013)	2	1	2	1.7
Qualter et al. (2007)	0	2	2	1.3

Webster-Stratton, Reid, & Stoolmiller (2008)	3	2	3	2.7
Wigelsworth, Humphrey & Lendrum (2012)	1	2	2	1.7

*All these scores have been rounded up to one decimal point.

Weight of Evidence B – Methodological Relevance

This refers to the appropriateness of the study design and analysis for answering the review question.

Weight of evidence	Description
High	• It uses an RCT design • There is an 'active' control group (receiving another type of intervention). • A follow up assessment is carried out. • Demonstrate group equivalence statistically. • There is low attrition across the whole study (20% or less) (Kratochwill, 2003). • There is evidence of implementation fidelity (researches actually checked the implementation was being executed according to the guidelines). • There is a systematic and clearly structured manual of the intervention. • Adequate sample size[1].
Medium	• [2]It is a quasi-experimental design with a control group. • There is a 'no experimental group'. • More than one post-test has been done. • There is a 30% or less attrition across the whole study (Kratochwill, 2003). • The intervention has a written procedure to follow.
Low	• It is a quasi-experimental design without a control group. • There is not a follow up assessment • Group equivalence is not statistically demonstrated. • There is a 40% or more attrition across the whole study (Kratochwill, 2003) or the attrition rate is not mentioned. • There are not any written guidelines of the intervention.

- There is not evidence of implementation fidelity.
- Sample size smaller than the suggested number[1].

[1]Power $p < .05$, $n = 64$ per intervention and control group for ANOVA and $p < .05$, $n = 67$ per intervention and control group for Multiple Regression (Kratochwill, 2003). For Multilevel Modelling more than 20 groups at macro level (i.e. schools) was considered appropriate (Kreft & de Leeuw, 1998).

[2]Quasi-experimental designs cannot be given a high score but only a medium or low score due to the lack of random assignment of participants.

Rationale for WoE B: the criteria described on the 'high' category are used to ensure objective and trustworthy statistical outcomes, the fidelity of the program and rule out any potential biases (Gough, Oliver & Thomas, 2012; Kratochwill, 2003).

The table below indicates the overall weight of evidence for methodological relevance (WoE B) in all the studies:

	Weighting Scores							
Studies	**Control Group**	**Follow up**	**Group Equivalence**	**Attrition Rate**	**Manual**	**Fidelity**	**Sample Size**	**Overall Weight**
Brackett et al. (2012)	2	1	3	0	3	3	3	2.1
Clarke, Bunting & Barry (2014)	2	3	3	3	2	2	3	2.6
Domitrovich, Cortes & Greenberg (2007)	3	1	3	3	2	3	3	2.6
Eodanable & Lauchlan (2011)	1	0	0	3	0	0	2	0.4
Haynes (2014)	2	0	3	0	0	0	3	1.1
Humphreyet al. (2010) (a)	2	3	0	0	2	0	3	0.7
Humphrey et al. (2010)	2	3	3	1	1	1	3	2
Knowler & Frederickson	3	1	3	3	2	3	1	2.3

(2013)								
Lewis et al. (2016)	2	0	3	0	0	1	1	1
Nix et al. (2013)	2	3	3	1	2	3	3	2.4
Qualter et al. (2007)	2	1	3	3	2	1	3	2.1
Webster-Stratton, Reid, & Stoolmiller (2008)	2	0	3	0	3	3	3	2
Wigelsworth, Humphrey & Lendrum (2012)	2	1	3	3	1	1	3	2

Weight of Evidence C – Topic Relevance

This refers to the appropriateness of the focus of each study when answering the review question.

Weight of evidence	Description
High	a) The intervention mainly targets the dimensions of EL assessed in this review (self-awareness, self-regulation, motivation and empathy). b) The intervention was implemented as a universal programme. c) EL is the primary outcome. d) EL is measured with an instrument that reflects the definition in this review. e) EL dimensions are presented as individual outcomes (separated to other outcomes). f) The results are based on students' scores only. g) The study uses the same measures for pre and post phases. h) Data collection was done with multiple methods and sources. i) The intervention was considered 'fun' by the students and/or teachers.
Medium	• The intervention focuses in other elements besides the EL dimensions assessed in this review, e.g social skills, mental health, academic skills, etc. • The intervention was implemented as a targeted programme for specific students only. • EL is a secondary outcome or a mean for targeting other outcomes. • EL is measured with an instrument that reflects most of the elements included in the definition in this review. • EL results are presented alongside other results but it is possible to differentiate them. • The results are based on students' and teachers' scores. • Use of measures with medium reliability and validity (r at least .70) (Kratochwill, 2003) • Use the same measures for pre and post phases. • Data collection was done with either multi-methods or multi-sources. • The intervention was considered 'ok' by the students and/or teachers.
Low	• EL is considered a small part or just an addition of the intervention implemented. • EL is measured with an instrument that reflects few elements of the definition in this review.

	• EL results are presented in conjunction to other outcomes and it is not possible to differentiate them (e.g. social and emotional skills). • The results are based on schools' scores. • It did not use the same measures for pre and post phases • Data collection did not use multi-methods nor multi-sources. • The students and/or teachers did not like the intervention or no information is provided.

Rational for WoE C:

a. To assess whether the possible changes in students' EL skills are in fact due to the intervention and not a by-product of another aspect of the environment.
b. Research has found that EL skills are related to other positive outcomes in life (Qualter, Whiteley, Hutchinson, & Pope, 2007; Petrides et al., 2004). For this reason, it is important that all the students receive the intervention.
c. To assess the degree which the intervention has been devised to produce change in the EL dimensions assessed in this review (i.e. self-awareness, self-regulation, motivation and empathy).
d. There are several definitions of EL skills, for this reason it is important that the results reported in this review match the chosen definition.
e. This will clarify whether the intervention is having any effect in the EL dimensions assessed in this review, or whether EL improvement is being inferred by the change in other outcomes (Zeidner, Roberts, & Matthews, 2002).
f. This is the population of interest in educational Psychology practice.
g. The use of the same measures at pre and post phase will assure the comparability of the outcomes.
h. Triangulation is good practice and confirms findings.
i. On one hand, if teachers enjoy the intervention they are more likely to implement it in the classroom. On another hand, if students enjoy the intervention they are more likely to learn from it.

The table below indicates the overall weight of evidence for topic relevance (WoE C) in all the studies:

	Weighting Scores									
Studies	**Dimension of EL in this review**	**Universal Programme**	**EL as primary outcome**	**Instrument matches definition**	**EL dimensions as individual outcomes**	**Students' scores only**	**Same Pre-post measures**	**Data Collection Multi-method/ sources**	**'Fun'**	**Overall Weight**
Brackett et al. (2012)	2	3	2	1	2	3	3	1	1	2
Clarke, Bunting & Barry (2014)	3	3	3	3	3	3	3	1	1	2.6
Domitrovich, Cortes & Greenberg (2007)	2	3	3	3	3	3	3	3	1	2.6
Eodanable & Lauchlan (2011)	3	2	3	3	3	3	3	3	2	2.8
Haynes (2014)	2	3	2	3	3	3	3	0	0	2.1
Humphrey, Kalambouka, Wigelsworth, & Lendrum (2010)	2	2	3	3	3	3	3	2	0	2.3

Humphrey et al. (2010)	3	2	3	3	3	3	3	2	1	2.6
Knowler & Frederickson (2013)	3	2	2	3	3	3	3	1	1	2.3
Lewis et al. (2016)	2	3	3	2	2	3	3	0	0	2
Nix et al. (2013)	2	2	2	2	2	3	3	3	1	2.2
Qualter et al. (2007)	2	2	2	2	2	3	3	1	1	2
Webster-Stratton, Reid, & Stoolmiller (2008)	2	3	3	1	2	3	2	3	0	2.1
Wigelsworth, Humphrey & Lendrum (2012)	3	3	2	3	3	3	3	1	1	2.4

Appendix C: Table of excluded studies

Excluded Studies	Reasons for Exclusion
1. Adams, S., Morris, D., Gilmore, G., & Frampton, I. (2010). A novel parent-supported emotional literacy programme for children. Community Practitioner, 83(8), 27–30.	*Criteria of implementers:* the study was not delivered by teachers but mainly by parents.
2. Benson, L. (2017). Universal Programming for Social Emotional Learning and Effects on Student Competence and Achievement: A thesis in School Psychology (Doctorate thesis). Michigan State University	It was not possible to obtain the text of this article.
3. Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2015). Examining variation in the impact of school-wide positive behavioral interventions and supports: Findings from a randomized controlled effectiveness trial. Journal of Educational Psychology, 107(2), 546–557. http://doi.org/10.1037/a0037630	*Criteria of implementers:* the intervention does not teach EL skills but focuses on behaviour.
4. Coates, K. (2016). An evaluation of Growing Early Mindsets (GEM™): A thesis in Educational Methodology, Policy, and Leadership (Doctorate thesis). University of Oregon.	It was not possible to obtain this article as the author had not authorised its publication.
5. Conduct Problems Prevention Research Group. (2010). The effects of a multiyear universal social-emotional learning program: The role of student and school characteristics. Journal of Consulting and Clinical Psychology, 78(2), 156–168. doi:10.1037/a0018607	*Criteria of outcomes:* the study does not measure EL skills but reduction in aggression.
6. Crooks, C. V., Scott, K. L., Broll, R., Zwarych, S., Hughes, R., & Wolfe, D. A. (2015). Does an evidence-based healthy relationships program for 9th graders show similar effects for 7th and 8th graders? Results from 57 schools randomized to intervention. Health Education Research, 30(3), 513–519. doi:10.1093/her/cyv014	*Criteria of outcomes:* the study does not measure EL skills but violence acceptancy.
7. Graves, S., Herndon-Sobalvarro, A., Nichols, K., Aston, C., Ryan, A., Blefari, A., … Prier, D. (2017). Examining the Effectiveness of a Culturally Adapted Social-Emotional Intervention for African American Males in an Urban Setting. *School Psychology Quarterly*, *32*(1), 62–74.	*Criteria of implementers:* The intervention is not implemented by school staff but by doctoral students.
8. Hagelskamp, C., Brackett, M. A., Rivers, S. E., & Salovey, P. (2013). Improving Classroom Quality with The RULER Approach to Social and Emotional Learning: Proximal and Distal Outcomes. American Journal of Community Psychology, 51(3–4), 530–543. http://doi.org/10.1007/s10464-013-9570-x	*Criteria of outcomes:* the study does not measure EL skills but emotional support, classroom organization and instructional support.

9. Harding, H. (2011). An Evaluation of a Targeted Group Intervention delivered to Year 8 pupils and broadly based on Cognitive-Behavioural Approaches.	*Criteria of intervention:* the intervention is not an EL or Social and EL intervention but a Cognitive Behavioural one.
10. Humphrey, N., Barlow, A., & Lendrum, A. (2018). Quality Matters: Implementation Moderates Student Outcomes in the PATHS Curriculum. Prevention Science, 19(2), 197–208. http://doi.org/10.1007/s11121-017-0802-4	*Criteria of design:* even though the study uses data from a previous RCT design; the authors did not include the data from the control group.
11. Hutchings, J., & Bywater, T. J. (2011). The Incredible Years Therapeutic Social and Emotional Skills Programme: A Pilot Study. School Psychology International, 33(3), 285–293. doi:10.1177/0143034311415899	*Criteria of outcomes:* the study does not measure EL skills but only behavioural and social skills.
12. Hutchings, J., Bywater, T., Gridley, N., Whitaker, C. J., Martin-Forbes, P., & Gruffydd, S. (2012). The incredible years therapeutic social and emotional skills programme: A pilot study. School Psychology International, 33, 285–293. http://doi.org/10.1177/0143034311415899	*Criteria of outcomes:* the study does not measure EL skills but only behavioural and social skills.
13. Johnson, V. L., Simon, P., & Mun, E.-Y. (2014). A peer-led high school transition program increases graduation rates among Latino males. Journal of Educational Research, 197(3), 186–196. http://doi.org/10.1016/j.micinf.2011.07.011.	*Criteria of outcomes:* the study does not measure EL skills but other skills to avoid school dropout.
14. Jones, S. M., Brown, J. L., Hoglund, W. L. G., & Aber, J. L. (2010). A School-Randomized Clinical Trial of an Integrated Social-Emotional learning and Literacy Intervention: Impacts after 1 school year. Journal of Consulting and Clinical Psychology, 78(6), 829–842. doi:10.1037/a0021383	*Criteria of outcomes:* the study does not measure EL skills but different themes related to aggression.
15. Jones, S. M., Brown, J. L., & Lawrence Aber, J. (2011). Two-Year Impacts of a Universal School-Based Social-Emotional and Literacy Intervention: An Experiment in Translational Developmental Research. Child Development, 82(2), 533–554. doi:10.1111/j.1467-8624.2010.01560.	*Criteria of outcomes:* the study does not measure EL skills but mental health.
16. Kiviruusu, O., Björklund, K., Koskinen, H.-L., Liski, A., Lindblom, J., Kuoppamäki, H., … Santalahti, P. (2016). Short-term effects of the "Together at School" intervention program on children's socio-emotional skills: a cluster randomized controlled trial. BMC Psychology, 4(1), 27. http://doi.org/10.1186/s40359-016-0133-4	*Criteria of intervention:* even though the study says to measure SEL skills, these do not match the definition giving of EL in this review.

17. Nix, R., Bierman, K., Heinrichs, B., Gest, S., Welsh, J., & Domitrovich, C. (2016). The Randomized Controlled Trial of Head Start REDI: Sustained Effects on Developmental Trajectories of Social–Emotional Functioning. Journal of Consulting and Clinical Psychology, 84(4), 310–322.	*Criteria of outcomes:* the authors measured social skills and EL skills as one united concept.
18. Ottmar, E. R., Rimm-Kaufman, S. E., Larsen, R. A., & Berry, R. Q. (2015). Mathematical Knowledge for Teaching, Standards-Based Mathematics Teaching Practices, and Student Achievement in the Context of the Responsive Classroom Approach. American Educational Research Journal, 52(4), 0002831215579484–. doi:10.3102/0002831215579484	*Criteria of participants:* the study does not measure changes in students but in teachers.
19. Rivers, S. E., Brackett, M. a., Reyes, M. R., Elbertson, N. a., & Salovey, P. (2013). Improving the Social and Emotional Climate of Classrooms: A Clustered Randomized Controlled Trial Testing the RULER Approach. Prevention Science, 14(1), 77–87. doi:10.1007/s11121-012-0305-2	*Criteria of outcomes:* the study does not measure EL skills despite being an EL intervention.
20. Webster-Stratton, C., & Reid, M. J. (2003). Treating Conduct Problems and Strengthening Social and Emotional Competence in Young Children: The Dina Dinosaur Treatment Program. Journal of Emotional and Behavioral Disorders, 11(3), 130–143. doi:10.1177/10634266030110030101	*Criteria of participants:* the study assesses a clinical population with a diagnosed conduct problem.
21. Wyman, P. A., Cross, W., Brown, C. H., Yu, Q., Tu, X., & Eberly, S. (2010). Intervention to strengthen emotional self-regulation in children with emerging mental health problems: Proximal impact on school behavior. Journal of Abnormal Child Psychology, 38, 707–720. http://doi.org/10.1007/s10802-010-9398-x	*Criteria for implementers:* the intervention was implemented for trained mentors that did not work alongside the teachers but worked independently with the students.

Appendix D: Rationale for excluded sections of Kratochwill Coding Protocol

Removed Sections	Rationale
Part I: B7-B8 Coding for qualitative research methods	All the studies included were quantitative
Part II: C3-C5 Rating for Secondary Outcomes Statistically Significant	This review is about Emotional Literacy as the main intervention under studied therefore EL skills tended to be in most studies a primary outcome.
Part II: D Educational/Clinical Settings	One of the selection criteria for this review was the need for the participants to NOT have a clinical diagnosis.
Part III: Table of participants' characteristics specified for Treatment and Control Group	This table has been summarised in the 'Mapping the Field' section (Appendix A).

Appendix E: Example of a Group Based Coding Protocol

Coding Protocol: Group Based Design

Domain: Group Based Design

School-and community-based intervention programs for social and behavioural problems	
Academic intervention programmes	
Family and parent intervention programmes	
School-wide and classroom-based programmes	✓
Comprehensive and coordinated school health services	

Name of Coder: V.T **Date:** 18.05.15

Full name of Study in APA format: Domitrovich, C. E., Cortes, R. C., & Greenberg, M. T. (2007). Improving young children's social and emotional competence: A randomised trial of the preschool "PATHS" curriculum. Journal of Primary Prevention, 28(2), 67–91. doi:10.1007/s10935-007-0081-0

Intervention Name (description from study): *Promoting Alternative Thinking Strategies curriculum (PATHS)* is a universal, teacher-taught social-emotional curriculum that is designed to improve children's social competence and reduce problem behaviour.

Study ID Number (Unique Identifier): 5

Type of Publication: (Check one)

Book/Monograph	
Journal article	✓
Book Chapter	
Other (specify):	

A. General Characteristics

A1. Random assignment designs

A1.1 Completely randomised design	
A1.2 Randomised block design (between participant variation)	
A1.3 Randomised block design (within-subjects variation)	
A1.4 Randomised hierarchical design	

A2. Nonrandomised designs

A2.1 Nonrandomised design	
A2.2 Nonrandomised block design (between participant variation)	✓
A2.3 Nonrandomised block design (within-subjects variation)	

A2.4 Nonrandomised hierarchical design	

A3. Overall confidence of judgement on how participants were assigned

A3.1 Very low (little basis)	
A3.2 Low (guess)	
A3.3 Moderate (weak inference)	
A3.4 High (strong inference)	✓
A3.5 Very high (explicitly stated)	
A3.6 N/A	
A3.7 Unknown/unable to code	

B. Statistical Treatment/ Data Analysis

	Yes	No	N/A
B1. Appropriate unit of analysis	✓		
B2. Familywise error rate controlled		✓	
B3. Sufficiently large *N*	✓		

B.3.1 Statistical Test: ANCOVA

B3. Significance Level: .05

ES: Medium

N required: 95 per group (190 in total)

B4. Total size of sample (start of the study): 20 classrooms (275 children)

B5. Intervention group sample size: 10 classrooms

B6. Control group sample size: 10 classrooms

C. Type of Programme

C.1 Universal prevention programme	✓
C.2 Selective prevention programme	
C.3 Targeted prevention programme	
C.4 Intervention/Treatment	
C.5 Unknown	

D. Stage of the Programme

D.1 Model/demonstration programmes	
D.2 Early stage programmes	✓

D.3 Established/institutionalised programmes	
D.4 Unknown	

E. Concurrent or Historical Intervention Exposure

E.1 Current exposure	
E.2 Prior Exposure	
E.3 Unknown	✓

II. Key Features for Coding Studies and Rating Levels of Evidence/Support

(3 = Strong Evidence; 2 = Promising Evidence; 1 = Weak Evidence; 0 = No Evidence)

A. Measurement

A1. Use of outcome measure produces reliable sources for the majority of primary outcomes.

A1.1Yes	✓
A1.2 No	
A1.3 Unknown/Unable to code	

A2. Multi-method

A2.1 Yes	✓
A2.2 No	
A2.3 N/A	
A2.4 Unknown/Unable to code	

A3. Multi-source

A3.1 Yes	✓
A3.2 No	
A3.3 N/A	
A3.4 Unknown/Unable to code	

A4. Validity of measures reported

A4.1 Yes validated with specific target group	✓
A4.2 In part, validated for general population only	
A4.3 No	
A4.4 Unknown/Unable to code	

Rating for Measurement

3	✓
2	

1	
0	

B. Comparison Group

B1. Type of Comparison Group

B1.1 Typical contact	
B1.2 Typical contact (other) specify:	
B1.3 Attention placebo	
B1.4 Intervention elements placebo	
B1.5 Alternative intervention	
B1.6 Pharmacotherapy	
B1.7 No intervention	
B1.8 Wait list/ delayed intervention	✓
B1.9 Minimal contact	
B1.10 Unable to identify comparison group	

Rating for Comparison Group

3	
2	✓
1	
0	

B2. Overall confidence rating in judgement of type of comparison group

B2.1 Very low (little basis)	
B2.2 Low (guess)	
B2.3 Moderate (weak inference)	
B2.4 High (strong inference)	
B2.5 Very high (explicitly stated)	✓
B2.6 N/A	
B2.7 Unknown/unable to code	

B3. Counterbalancing of Change Agents

B3.1 By change agent	
B3.2 Statistical	

B3.3 Other	

None

B4. Group Equivalence Established

B4.1 Random assignment	
B4.2 Post hoc matched set	✓
B4.3 Statistical matching	
B4.4 Post hoc test for group equivalence	

B5. Equivalent Mortality

B5.1 Low attrition (less than 20% for Post)	✓
B5.2 Low attrition (less than 30% for follow-up)	
B5.3 Intent to intervene analysis carried out Findings: No significant group differences	

C. Primary Outcomes Are Statistically Significant

C.1 Evidence of appropriate statistical analysis for primary outcomes

C1.1 Appropriate unit of analysis	✓
C1.2 Familywise/experimenterwise error rate controlled when applicable	
C1.3 Sufficiently large *N*	✓

C2. Percentage of primary outcomes that are statistically significant

C2.1 Significant primary outcomes for at least 75% of the total primary measures for each key construct	
C2.2 Significant primary outcomes for between 50% and 74% of the total primary measures for each key construct	✓
C2.3 Significant primary outcomes for between 25% and 49% of the total primary measures for each key construct	

Rating for Primary Outcomes Statistically Significant

3	
2	✓
1	
0	

D. Primary Outcomes Statistically Significant (only list $p \leq .05$)

Outcomes	Primary	Who changed?	What changed?	Source	Treatment Information	Outcome Measure Used	Reliability	ES
Outcome # 1 Emotion Knowledge	Primary	Children	Knowledge	Standardised Test	PATHS	KEI	For the sample: α = .75	d = .36
Outcome # 2 Emotion Expression	Primary	Children	Behaviour	Standardised Test	PATHS	ACES	α = .59	d = .37
Outcome # 3	Primary	Children	Behaviour	Standardised Test	PATHS	ACES	α = .59	d = .40

Anger Bias								
Outcome # 4 Children's social and emotional competence	Primary	Children	Behaviour	Standardised Test	PATHS	Head Start Parents scale measuring		d = .36

Type of Data Effect Size is Based On	**Type of Data Effect Size is Based On**
Means and SDs ☑	Highly estimated (e.g., only have *N* p value) ☑
t - value or *F* – value	Moderate estimation (e.g., have complex but complete statistics)
Chi-square (*df* = 1)	Some estimation (e.g., unconventional statistics that require conversion)
Frequencies or proportions (dichotomous)	Slight estimation (e.g., use significance testing statistics rather than descriptives)
Frequencies or proportions (polytomous)	No estimation (e.g., all descriptive data is present)
Other (specify): Unknown	

E. Identifiable Components

E1. Evidence for primary outcomes:

3	
2	✓
1	
0	

E2. Design allows for analysis of identifiable components	Yes	No
		✓

E3. Total number of components:

E4. Number of components linked to primary outcomes:

Additional criteria to code descriptively:

	Yes	No
E5. Clear documentation of essential components		✓
E6. Procedures for adapting the intervention are described in detail		✓
E7. Contextual features of the intervention are documented	✓	

Rating of Identifiable Components

3	
2	
1	
0	✓

F. Implementation Fidelity

F1. Evidence of Acceptable Adherence

F1.1 Ongoing supervision/consultation	✓
F1.2 Coding intervention sessions/lessons or procedures	✓
F1.3 Audio/video tape implementation	

F1.3.1 Entire intervention	
F1.3.2 Part of intervention	

F2. Manualization

F2.1 Written material involving a detailed account of the exact procedures and the sequence in which they are to be used	
F2.2 Formal training session that includes a detailed account of the exact procedures and the sequence in which they are to be used	✓

F2.3 Written material involving an overview of broad principles and a description of the intervention phases	
F2.4 Formal or informal training session involving an overview of broad principles and a description of the intervention phases	

	Yes	No	Unknown
F3. Adaptation procedures are specified			✓

Rating for Implementation Fidelity

3	
2	✓
1	
0	

G. Replication

G1. Same Intervention	
G2. Same Target Problem	
G3. Independent evaluation	

Information was not provided

Rating of Replication

3	
2	
1	
0	✓

H. Site of Implementation

H1. School:

H1.1 Public	✓
H1.2 Private	
H1.3 Charter	
H1.4 University Affiliated	
H1.5 Alternative	
h1.6 Not specific/unknown	

H2. Non-school site

H2.1 Home	
H2.2 University Clinic	
H2.3 Summer Program	
H2.4 Outpatient Hospital	
H2.5 Partial inpatient/day intervention Program	
H2. 6 Inpatient Hospital	

h2. 7 Private Practice	
H2.8 Mental Health Centre	
H2.9 Residential Treatment Facility	
H2.10 Other (specify):	
H2.11 Unknown/ insufficient information provided	

Rating for Site of Implementation

3	✓
2	
1	
0	

I. Follow up Assessment

	Timing of follow up assessment: specify
	Number of participants included in the follow up assessment: specify
	Consistency of assessment method used: specify

II. Other Descriptive or Supplemental Criteria to Consider

A. External Validity Indicators

	Yes	No
A1. Sampling procedures described in detail	✓	

Specify rationale for selection: Low SES and Social and Emotional Problems

Specify rationale for sample size: Convenience sampling (no rational specified)

	Yes	No
A1.1 Inclusion/exclusion criteria specified		✓
A1.2 Inclusion/exclusion criteria similar to school practice		✓
A1.3 Specified criteria related to concern	✓	

A2. Participant Characteristics Specified for Treatment and Control Group (see Appendix A).

A3. Details are provided regarding variables that:

	Yes	No
A3.1 Have differential relevance for intended outcomes *Specify*: Verbal ability	✓	
A3.2 Have relevance to the inclusion criteria *Specify:*		✓

A4. Receptivity/acceptance by target participant population

No data reported for receptivity/acceptance

Participants from Treatment Group	Results (What person reported to have gained from participation in programme)	General Rating
Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention
Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention
Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention

A5. Generalisation of Effects:

A5.1 Generalisation over time

	Yes	No
A5.1.1 Evidence is provided regarding the sustainability of outcomes after intervention is terminated. *Specify:*		✓
A5.1.2 Procedures for maintaining outcomes are specified		

A5.2 Generalisation across settings

	Yes	No
A5.2.1 Evidence is provided regarding the extent to which outcomes are maintained in contexts that are different from the intervention context. *Specify:*		✓
A5.2.2 Documentation of the efforts to ensure application of intervention to other settings. *Specify*: Daily homework		✓
A5.2.3 Impact on implementers or context is sustained. *Specify*:		✓

A5.3 Generalisation across persons

	Yes	No
A5.3.1 Evidence is provided regarding the degree to which outcomes are manifested with participants who are different than the original group of participants for with the intervention was evaluated. *Specify*:		✓

B. Length of Intervention

B1. Unknown/insufficient information provided	
B2. Information provided (if information provided, specify one of the following):	✓

B2.1. Weeks: __

B2.2 Months: __

B2.3 Years: 1 academic year (9 months)

B2.4 Other: __

C. Intensity/dosage of Intervention

C1. Unknown/insufficient information provided	
C2. Information provided (if information provided, specify one of the following):	✓

C2.1. Length of intervention session: weekly lessons and extension activities

C2.2 Frequency of intervention sessions: once a week

D. Dosage Response

D1. Unknown/insufficient information provided	✓
D2. Information provided (if information provided, answer D2.1):	

D2.1 Describe positive outcomes associated with higher dosage:_____

E. Programme Implementer

E1. Research Staff	
E2. School Speciality Staff	
E3. Teachers	✓
E4. Educational Assistants	
E5. Parents	
E6. College Students	
E7. Peers	
E8. Others	
E9. Unknown/insufficient information provided	

F. Characteristics of the Intervener

F1. Highly similar to target population on key variables (e.g., race, gender, SES)	
F2. Somewhat similar to target participants on key variables	
F3. Different from target participants on key variables	

Information was not provided.

G. Intervention Style or Orientation

G1. Behavioural	✓
G2. Cognitive-behavioural	✓
G3. Experimental	
G4. Humanistic/Interpersonal	
G5. Psychodynamic/insight oriented	
G6. Other, *specify:*	
G7. Unknown/insufficient information provided	

H. Cost Analysis Data

H1. Unknown/insufficient information provided	✓
H2. Information provided (if information provided, answer H2.1):	

H2.1 Estimated Cost of Implementation:_____

I. Training and Support Resources

I1. Simple orientation given to change agents	
I2. Training workshops conducted	✓

# of workshops provided: 2 and 1 booster session

Average length of training: 1 day

Who conducted training:

I2.1 Project Director	
I2.2 Graduate/project assistants	
12.3 Other, *specify:*	
12.4 Unknown	✓

I3. Ongoing technical support	✓
I4. Programme materials obtained	
I5. Special facilities	
I6. Other, *specify:*	

J. Feasibility

J1. Level of difficulty in training intervention agents

J1.1 High	
J1.2 Moderate	
J1.3 Low	
J1.4 Unknown	✓

J2. Cost to train intervention agents (specify if known): unknown

J3. Rating cost to train intervention agents:

J3.1 High	
J3.2 Moderate	
J3.3 Low	
J3.4 Unknown	✓

Summary of Evidence for Group-Based Design Studies

Indicator	Overall Evidence Rating NNR = No numerical rating or 0-3	Description of Evidence (Strong, Promising, Weak, No/limited evidence, or Descriptive Ratings
General Characteristics		
General Design Characteristics	NNR	Non-randomised block design
Statistical Treatment	NNR	ANCOVA
Type of Programme	NNR	Universal prevention programme
Stage of Programme	NNR	Early Stage Programme
Concurrent/Historical Intervention Exposure	NNR	Unknown
Key Features		
Measurement	3	Strong
Comparison Group	2	Promising evidence
Primary Outcomes are Statistically Significant	2	Promising evidence
Educational/Clinical Significance	N/A	N/A
Identifiable Components		No evidence
Implementation Fidelity	0	Weak
Descriptive or Supplemental Criteria		
External Validity Indicators	NNR	Limited evidence
Length of Intervention	NNR	1 year
Intensity/Dosage	NNR	Different activities during the day

Dosage Response	NNR	Unknown
Programme Implementer	NNR	Teachers
Characteristics of the Intervener	NNR	Unknown
Intervention Style/Orientation	NNR	Behavioural/Cognitive-behavioural
Cost Analysis Data Provided	NNR	Unknown
Training and Support Resources	NNR	Teachers received 2 training workshops and 1 booster session
Feasibility	NNR	Unknown

Appendix F: Example of a Quasi-experimental Coding Protocol

This protocol has been adapted from the original for RCT designs Kratchowill (2003).

Domain: Quasi-experimental design

School-and community-based intervention programs for social and behavioural problems	
Academic intervention programmes	
Family and parent intervention programmes	
School-wide and classroom-based programmes	✓
Comprehensive and coordinated school health services	

Name of Coder: V.T **Date:** 01.01.16

Full name of Study in APA format: Humphrey, N., Kalambouka, A., Wigelsworth, M., & Lendrum, A. (2010). Going for Goals: An Evaluation of a Short, Social-Emotional Intervention for Primary School Children. School Psychology International, 31(3), 250–270. doi:10.1177/0143034309352578

Intervention Name (description from study): *Going for Goals* is a short-targeted intervention developed as part of the primary social and emotional aspects of learning (SEAL) programme in England.

Study ID Number (Unique Identifier): 12

Type of Publication: (Check one)

Book/Monograph	
Journal article	✓
Book Chapter	
Other (specify):	

C. General Characteristics:

A1. Quasi-Experimental Designs without Control Groups

The One-Group Posttest-Only Design	
The One-Group Posttest-Only Design with Multiple Substantive Posttests	
The One-Group Pretest-Posttest Design	

The One-Group Pretest-Posttest Design Using a Double Pretest	
The One-Group Pretest-Posttest Design Using a Non-equivalent Dependent Variable	
The Removed-Treatment Design	
The Repeated-Treatment Design	

A2. Quasi-Experimental Designs with Control Groups

The Post-test only design that uses non-equivalent groups	
The untreated-control group design that uses dependent pre-test and post-test samples	
The untreated-control group design that uses dependent pre-test and post-test samples and a double pre-test	✓
The untreated-control group design that uses dependent pre-test and post-test samples and switching replications	

D. Statistical Treatment/ Data Analysis

	Yes	No	N/A
B1. Appropriate unit of analysis	✓		
B2. Familywise error rate controlled	✓		
B3. Sufficiently large *N*	✓		

B.3.1 Statistical Test: ANCOVA and T tests

B3. Significance Level: .05

ES: Small

N required: unknown (information no provided)

B4. Total size of sample (start of the study): 182 children

B5. Intervention group sample size: 102 children

B6. Control group sample size: 80 children

F. Type of Programme

C.1 Universal prevention programme	
C.2 Selective prevention programme	
C.3 Targeted prevention programme	✓
C.4 Intervention/Treatment	
C.5 Unknown	

G. Stage of the Programme

D.1 Model/demonstration programmes	
D.2 Early stage programmes	✓
D.3 Established/institutionalised programmes	
D.4 Unknown	

H. Concurrent or Historical Intervention Exposure

E.1 Current exposure	
E.2 Prior Exposure	
E.3 Unknown	✓

II. Key Features for Coding Studies and Rating Levels of Evidence/Support

(3 = Strong Evidence; 2 = Promising Evidence; 1 = Weak Evidence; 0 = No Evidence)

I. Measurement

A1. Use of outcome measure produces reliable sources for the majority of primary outcomes.

A1.1Yes	✓
A1.2 No	
A1.3 Unknown/Unable to code	

A2. Multi-method

A2.1 Yes	
A2.2 No	✓
A2.3 N/A	
A2.4 Unknown/Unable to code	

A3. Multi-source

A3.1 Yes	✓
A3.2 No	
A3.3 N/A	
A3.4 Unknown/Unable to code	

A4. Validity of measures reported

A4.1 Yes validated with specific target group	✓
A4.2 In part, validated for general population only	
A4.3 No	
A4.4 Unknown/Unable to code	

Rating for Measurement

3	
2	✓
1	
0	

J. Comparison Group

B1. Type of Comparison Group

B1.1 Typical contact	
B1.2 Typical contact (other) specify:	
B1.3 Attention placebo	
B1.4 Intervention elements placebo	
B1.5 Alternative intervention	
B1.6 Pharmacotherapy	
B1.7 No intervention	
B1.8 Wait list/ delayed intervention	
B1.9 Minimal contact	
B1.10 Unable to identify comparison group	✓

Rating for Comparison Group

3	
2	
1	✓
0	

B2. Overall confidence rating in judgement of type of comparison group

B2.1 Very low (little basis)	✓
B2.2 Low (guess)	
B2.3 Moderate (weak inference)	
B2.4 High (strong inference)	
B2.5 Very high (explicitly stated)	
B2.6 N/A	
B2.7 Unknown/unable to code	

B3. Counterbalancing of Change Agents

B3.1 By change agent	
B3.2 Statistical	
B3.3 Other	

None (the information was not provided)

B4. Group Equivalence Established

B4.1 Random assignment	
B4.2 Post hoc matched set	
B4.3 Statistical matching	
B4.4 Post hoc test for group equivalence	

None (the information was not provided)

B5. Equivalent Mortality

B5.1 Low attrition (less than 20% for Post)	
B5.2 Low attrition (less than 30% for follow-up)	
B5.3 Intent to intervene analysis carried out Findings: No significant group differences	

None (the information was not provided)

K. Primary Outcomes that are Statistically Significant

C.1 Evidence of appropriate statistical analysis for primary outcomes

C1.1 Appropriate unit of analysis	✓
C1.2 Familywise/experimenterwise error rate controlled when applicable	✓
C1.3 Sufficiently large *N*	✓

C2. Percentage of primary outcomes that are statistically significant

C2.1 Significant primary outcomes for at least 75% of the total primary measures for each key construct	
C2.2 Significant primary outcomes for between 50% and 74% of the total primary measures for each key construct	✓
C2.3 Significant primary outcomes for between 25% and 49% of the total primary measures for each key construct	

Rating for Primary Outcomes Statistically Significant

3	
2	✓
1	
0	

L. Primary Outcomes Statistically Significant (only list $p \leq .05$)

Outcomes	Primary	Who changed?	What changed?	Source	Treatment Information	Outcome Measure Used	Reliability	ES
Outcome # 1 Emotional Literacy	Primary	Children	Knowledge Attitude Behaviour	Self-report	Going for Goals	ELAI	Manual's α = .70 - .82 for the Teacher version	d = .05
Outcome # 2 Emotional Literacy	Primary	Children	Knowledge Attitude Behaviour	Teacher report	Going for Goals	ELAI	Manual's α = .70 - .82 for the Teacher version	d = .29
Outcome # 3 Behavioural and Emotional Wellbeing	Primary	Children	Knowledge Attitude Behaviour	Teacher report	Going for Goals	SDQ	No information was provided.	d = .32

Type of Data Effect Size is Based On	Type of Data Effect Size is Based On
Means and SDs	Highly estimated (e.g., only have *N* p value) ☑
t - value or *F* – value ☑	Moderate estimation (e.g., have complex but complete statistics)
Chi-square (*df* = 1)	Some estimation (e.g., unconventional statistics that require conversion)
Frequencies or proportions (dichotomous)	Slight estimation (e.g., use significance testing statistics rather than descriptives)

Frequencies or proportions (polytomous) Other (specify): Unknown	No estimation (e.g., all descriptive data is present)

M. Identifiable Components

E1. Evidence for primary outcomes:

3	
2	✓
1	
0	

	Yes	No
E2. Design allows for analysis of identifiable components		✓

E3. Total number of components:

E4. Number of components linked to primary outcomes:

<u>Additional criteria to code descriptively:</u>

	Yes	No
E5. Clear documentation of essential components		✓
E6. Procedures for adapting the intervention are described in detail		✓
E7. Contextual features of the intervention are documented	✓	

Rating of Identifiable Components

3	
2	
1	
0	✓

N. Implementation Fidelity

F1. Evidence of Acceptable Adherence

F1.1 Ongoing supervision/consultation	
F1.2 Coding intervention sessions/lessons or procedures	
F1.3 Audio/video tape implementation	

F1.3.1 Entire intervention	
F1.3.2 Part of intervention	

Information was not provided

F2. Manualization

F2.1 Written material involving a detailed account of the exact procedures and the sequence in which they are to be used	
F2.2 Formal training session that includes a detailed account of the exact procedures and the sequence in which they are to be used	
F2.3 Written material involving an overview of broad principles and a description of the intervention phases	✓
F2.4 Formal or informal training session involving an overview of broad principles and a description of the intervention phases	

	Yes	No	Unknown
F3. Adaptation procedures are specified		✓	

Rating for Implementation Fidelity

3	
2	
1	✓
0	

O. Replication

G1. Same Intervention	
G2. Same Target Problem	
G3. Independent evaluation	

Information was not provided

Rating of Replication

3	
2	
1	
0	✓

P. Site of Implementation

H1. School:

H1.1 Public	✓
H1.2 Private	
H1.3 Charter	
H1.4 University Affiliated	
H1.5 Alternative	
h1.6 Not specific/unknown	

H2. Non-school site

H2.1 Home	
H2.2 University Clinic	
H2.3 Summer Program	
H2.4 Outpatient Hospital	
H2.5 Partial inpatient/day intervention Program	
H2. 6 Inpatient Hospital	
h2. 7 Private Practice	
H2.8 Mental Health Centre	
H2.9 Residential Treatment Facility	
H2.10 Other (specify):	
H2.11 Unknown/ insufficient information provided	

Rating for Site of Implementation

3	✓
2	
1	
0	

Q. Follow up Assessment

✓	Timing of follow up assessment: *7 weeks after*
✓	Number of participants included in the follow up assessment: *32*
✓	Consistency of assessment method used: *ELAI and SDQ*

III. Other Descriptive or Supplemental Criteria to Consider

K. External Validity Indicators

	Yes	No
A1. Sampling procedures described in detail	✓	

Specify rationale for selection: Social Emotional Problems and specific group of children that do not respond to universal interventions only.
Specify rationale for sample size: Convenience sampling (no rational specified)

	Yes	No
A1.1 Inclusion/exclusion criteria specified		✓
A1.2 Inclusion/exclusion criteria similar to school practice	✓	
A1.3 Specified criteria related to concern	✓	

A2. Participant Characteristics Specified for Treatment and Control Group (see Appendix A).

A3. Details are provided regarding variables that:

	Yes	No
A3.1 Have differential relevance for intended outcomes *Specify*: Verbal ability		✓
A3.2 Have relevance to the inclusion criteria *Specify:*		✓

A4. Receptivity/acceptance by target participant population

No data reported for receptivity/acceptance

Participants from Treatment Group	**Results (What person reported to have gained from participation in programme)**	**General Rating**
Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention
Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention

Child/Student Parent/caregiver Teacher School Other		Participants reported benefiting overall from the intervention Participants reported not benefiting overall from the intervention

A5. Generalisation of Effects:

A5.1 Generalisation over time

	Yes	No
A5.1.1 Evidence is provided regarding the sustainability of outcomes after intervention is terminated: *8 weeks after intervention*	✓	
A5.1.2 Procedures for maintaining outcomes are specified		✓

A5.2 Generalisation across settings

	Yes	No
A5.2.1 Evidence is provided regarding the extent to which outcomes are maintained in contexts that are different from the intervention context. *Evidence is provided but the results were not significant*	✓	
A5.2.2 Documentation of the efforts to ensure application of intervention to other settings. *Specify*:		✓
A5.2.3 Impact on implementers or context is sustained. *Specify*:		✓

A5.3 Generalisation across persons

	Yes	No
A5.3.1 Evidence is provided regarding the degree to which outcomes are manifested with participants who are different than the original group of participants for with the intervention was evaluated. *Specify*:		✓

L. Length of Intervention

B1. Unknown/insufficient information provided	
B2. Information provided (if information provided, specify one of the following):	✓

B2.1. Weeks: 7-8

B2.2 Months: __

B2.3 Years: __

B2.4 Other: __

M. Intensity/dosage of Intervention

C1. Unknown/insufficient information provided	
C2. Information provided (if information provided, specify one of the following):	✓

C2.1. Length of intervention session: 45 minutes

C2.2 Frequency of intervention sessions: once a week

N. Dosage Response

D1. Unknown/insufficient information provided	✓
D2. Information provided (if information provided, answer D2.1):	

D2.1 Describe positive outcomes associated with higher dosage:_____

O. Programme Implementer

E1. Research Staff	
E2. School Speciality Staff	
E3. Teachers	
E4. Educational Assistants	✓
E5. Parents	
E6. College Students	
E7. Peers	
E8. Others	
E9. Unknown/insufficient information provided	

P. Characteristics of the Intervener

F1. Highly similar to target population on key variables (e.g., race, gender, SES)	
F2. Somewhat similar to target participants on key variables	
F3. Different from target participants on key variables	

Information was not provided.

Q. Intervention Style or Orientation

G1. Behavioural	
G2. Cognitive-behavioural	✓
G3. Experimental	
G4. Humanistic/Interpersonal	
G5. Psychodynamic/insight oriented	
G6. Other, *specify:*	
G7. Unknown/insufficient information provided	

R. Cost Analysis Data

H1. Unknown/insufficient information provided	✓
H2. Information provided (if information provided, answer H2.1):	

H2.1 Estimated Cost of Implementation:_____

S. Training and Support Resources

I1. Simple orientation given to change agents	
I2. Training workshops conducted	

The information was not provided

# of workshops provided:

Average length of training:

Who conducted training?

I2.1 Project Director	
I2.2 Graduate/project assistants	
12.3 Other, *specify:*	
12.4 Unknown	✓

I3. Ongoing technical support	
I4. Programme materials obtained	
I5. Special facilities	
I6. Other, *specify:*	

T. Feasibility

J1. Level of difficulty in training intervention agents

J1.1 High	✓
J1.2 Moderate	
J1.3 Low	
J1.4 Unknown	

J2. Cost to train intervention agents (specify if known): unknown

J3. Rating cost to train intervention agents:

J3.1 High	
J3.2 Moderate	
J3.3 Low	
J3.4 Unknown	✓

Summary of Evidence for Group-Based Design Studies

Indicator	Overall Evidence Rating NNR = No numerical rating or 0-3	Description of Evidence (Strong, Promising, Weak, No/limited evidence, or Descriptive Ratings
General Characteristics		
General Design Characteristics	NNR	Quasi-experimental pre-post test design with control group
Statistical Treatment	NNR	ANCOVA and T-test
Type of Programme	NNR	Short targeted intervention
Stage of Programme	NNR	Early Stage Programme
Concurrent/Historical Intervention Exposure	NNR	Unknown
Key Features		
Measurement	2	Promising evidence
Comparison Group	1	Weak
Primary Outcomes are Statistically Significant	2	Promising evidence
Educational/Clinical Significance	N/A	N/A
Identifiable Components		No evidence
Implementation Fidelity	1	Weak
Replication		No evidence
Site of Implementation	3	Strong
Follow up assessment conducted	1	Weak
Descriptive or Supplemental Criteria		
External Validity Indicators	NNR	No evidence
Length of Intervention	NNR	7-8 weeks
Intensity/Dosage	NNR	45 minutes once a week
Dosage Response	NNR	Unknown
Programme Implementer	NNR	Teaching Assistants
Characteristics of the Intervener	NNR	Unknown
Intervention Style/Orientation	NNR	Cognitive-behavioural
Cost Analysis Data Provided	NNR	Unknown
Training and Support Resources	NNR	Teachers received a manual
Feasibility	NNR	High

Appendix G: Peer Conflict behaviour frequency charts per participant

Participant 1

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[1]	Examples of behaviour	Frequency				
Physical aggression	Poking, pushing, punching, throwing things,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Verbal aggression	Calling others names	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Argues with others	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Tell tales about others	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational aggression	Refuses to play or work with others,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Gives mean look to others,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Doesn't share	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	It's bossy	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 2

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[1]	Examples of behaviour	Frequency				
Hindering other children	Distracting others from their work	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Speaking at inappropriate time i.e. when teacher is speaking, when he should be doing his work	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Physical aggression	Pushing, shoving	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Verbal aggression	Calling others names, tell tales about others	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Argues with others,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational aggression	Refuses to play or work with others,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Gives mean look to others	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Is bossy	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 3

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[1]	Examples of behaviour	Frequency				
Escalation and retaliation	When things start being verbal this student turns them into a physical aggression	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Physical aggression	Poking, pushing, striking others, throwing things, starts a fight	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Verbal aggression	Threats others, divides the group, monopolises one member of the group	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational aggression	Controlling one friend and not allowing others to play with that friend, doesn't let others join in the group, gives mean look to others, doesn't share, is bossy	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Starts or gets involves in conflict during unstructured and unsupervised environment.	During playtime, lunch time, getting changed for PE, etc.,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 4

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[1]	Examples of behaviour	Frequency				
Interfering with others' conflict	When students are having a conflict he gets involved and the conflict escalates	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Looking out for other children behaving badly	Reports incidents that other students seem to be involved with and this annoys them (i.e. tells tales about others)	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Physical aggression	Poking, pushing, striking others, kicking,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Verbal aggression	Calling others names, argues with others.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational aggression	Gives mean looks to others, if someone annoys him he responds in a malicious way (i.e. trying to upset them).	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 5

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[1]	**Examples of behaviour**	**Frequency**				
Hindering other children	Distracting others from their work, interfering with their equipment or materials, making funny noises	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Physical aggression	Poking, pushing, striking others, throwing things, kicking	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Verbal aggression	Argues with others, tell tales about others, can be critical about others' work	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational aggression	Doesn't let others join in the group, doesn't share, is bossy	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Appendix H: Pro-Social behaviour frequency chart per participant

Participant 1

Behaviour[2]	Examples of behaviour	Frequency				
Helps others	Helps others without being told by the teacher	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with peers	Other children want to play with him, others include him in their game	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Helps other to sort out a problem, it is good at preventing conflict,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows generosity	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Includes others in a game	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Use of manners	Says please and thank you.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Emotional Literacy Skills	Shows understanding of others' emotions	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows remorse	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 2

Behaviour[2]	Examples of behaviour	Frequency				
Social/relational interaction with peers	It is good at preventing conflict,	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Helps other to sort out a problem, tries to intervene in peers quarrels	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Use of manners	Says please and thank you.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with adults	Wants to help adults to do something, etc.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows more respect to adults	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Emotional Literacy Skills	Shows understanding of others' emotions	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows remorse	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows empathy	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 3

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[2]	Examples of behaviour	Frequency				
Helps others	Offers to assist a pupil with a task	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with peers	Includes others in her games	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Avoids confrontation with others	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Use of manners with her peers	Says 'please' and 'thank you' to other students. It's polite towards others.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with adults	Wants to help adults to do something.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Emotional Literacy Skills	Describes that is able to control herself more.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows understanding of others' emotions	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows remorse	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 4

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[2]	**Examples of behaviour**	**Frequency**				
Helps others	Likes to help others with their work, to tidy up, find something that is lost, etc.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with peers	Helps other to sort out a problem	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	it is good at preventing conflict	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with adults	Accepts teacher's reprimands without talking back	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Participant 5

Date: ___/___/_____ Time: _____:_____ Lesson: _____ Child's initials: _____

Behaviour[2]	**Examples of behaviour**	**Frequency**				
Social/relational interaction with peers	Helps other to sort out a problem	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Avoids interfering in others' conflicts, it is good at preventing conflict.	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Includes others in a game	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
	Shows generosity	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___
Social/relational interaction with adults	Listens and acts on adults' requests	Not at all	1 time	2 times	3 times	More than 4 times Please specify ___

Appendix I: Ethical Approval

UCL RESEARCH ETHICS COMMITTEE
ACADEMIC SERVICES

2 November 2015

Dr Benjamin Hayes
Division of Psychology and Language Sciences
UCL

Dear Dr Hayes

Notification of Ethical Approval
Project ID: 7355/001: Restorative conversation, a differentiated way of dealing with Interpersonal Conflict

Further to your satisfactory responses to the committee's concerns, I am pleased to confirm in my capacity as Chair of the UCL Research Ethics Committee (REC) that your study has been approved by the REC for the duration of the project i.e. until August 2017.

Approval is subject to the following conditions:

1. You must seek Chair's approval for proposed amendments to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form': http://ethics.grad.ucl.ac.uk/responsibilities.php

2. It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. The adverse event will be considered at the next Committee meeting and a decision will be made on the need to change the information leaflet and/or study protocol.

   For non-serious adverse events the Chair or Vice-Chair of the Ethics Committee should again be notified via the Ethics Committee Administrator (ethics@ucl.ac.uk) within ten days of an adverse incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

On completion of the research you must submit a very brief report of your findings/concluding comments to the Committee, which includes in particular issues relating to the ethical implications of the research.

Yours sincerely

Professor John Foreman
Chair of the UCL Research Ethics Committee

Academic Services, 1-19 Torrington Place (9th Floor),
University College London
Tel: +44 (0)20 3108 8216
Email: ethics@ucl.ac.uk
http://ethics.grad.ucl.ac.uk/

Appendix J: Amendment Approval Request

UCL RESEARCH ETHICS COMMITTEE

Amendment Approval Request Form

1	**Project ID Number:** 7355/001	**Name and Address of Principal Investigator:** Dr Benjamin Hayes Educational Psychology, University College London, 26 Bedford Way, London, WC1H 0AP
2	**Project Title:** Restorative Conversation, a differentiated way of dealing with Interpersonal Conflict	
3	**Type of Amendment/s (tick as appropriate)**	

- ☒ Research procedure/protocol (including research instruments)
- ☐ Participant group
- ☐ Sponsorship/collaborators
- ☐ Extension to approval needed (extensions are given for one year)
- ☐ Information Sheet/s
- ☐ Consent form/s
- ☐ Other recruitment documents
- ☐ Principal researcher/medical supervisor*
- ☐ Other *

*Additions to the research team other than the principal researcher, student supervisor and medical supervisor do not need to be submitted as amendments but a complete list should be available upon request.

4	**Justification** (give the reasons why the amendment/s are needed) I will use: * The Emotional Literacy Assessment-Pupil Form (ELA-PF) (Faupel, 2003) to measure Emotional Literacy instead of Trait Emotional Intelligence. The reason being that the ELA provides clear cut-off points for 'low', 'average' and 'below average' scores making the identification of improvement easier. This will be a pre-post test measure. * I will use the 'Guess Who?' questionnaire instead of the SDQ questionnaire. The Guess Who? is a peer nominated questionnaire that explores students' socio-metric status. This will allow me to triangulate the information for the participants selection proccess i.e. to ensure that the student nominated by the teacher is also nominated by the rest of the class.
5	**Details of Amendments** (provide full details of each amendment requested, state where the changes have been made and attach all amended and new documentation) The amendments requested are the use of a different questionnaire for the selection criteria; and a different questionnaire for the the pre and post test section. The questionnaires are attached.
6	**Ethical Considerations** (insert details of any ethical issues raised by the proposed amendment/s) Some of the questions and statements of the new questionnaires could be considered as emotionally evocative. Consequently, in the case that any of the students feel upset, or concerned about the information evoked in the questionnaires, I will use the skills that I have learnt during my first year and offer them time to share their concerns. I will always reinforce their right to confidentiality and set clear rules about anything that would need to be shared with a third party. If this is necessary, I will pass on any information (firstly by asking the student for their consent) to the person in charge of safeguarding (or similar) at the school. In addition, the student will also be given the opportunity to speak with their class teacher instead.

	In the case that some students feel concerned about being 'picked on' with the Guess Who? questionnaire, I will start the session by setting clear boundaries of confidentiality among the children, I will ask them not to talk with each other about the statements as well as remind everyone that every response is anonimised. I will also make sure that students have enough space between each other so they can't see each others' responses. Additionally, at the end of the questionnaire the teacher and I will do a 'buffer' activity to 'clear the air between the students'. In the case the student feels concerned about not being able to understand any of the questions, I will always check that the student fully grasps the main idea of the question by using 'child friendly' words. In the case the student worries about getting an answer wrong, I will explain that there are no right or wrong answers at the beginning of the session. I will also explain the objective of the assessment and make it clear that it is not about the student's academic ability.
7	**Other Information** (provide any other information which you believe should be taken into account during ethical review of the proposed changes) Students will be given the opportunity to withdraw from the process at any time.

Declaration (to be signed by the Principal Researcher)

- I confirm that the information in this form is accurate to the best of my knowledge and I take full responsibility for it.
- I consider that it would be reasonable for the proposed amendments to be implemented.
- For student projects I confirm that my supervisor has approved my proposed modifications.

Signature:

Date: 28.12.15

FOR OFFICE USE ONLY:

Amendments to the proposed protocol have been ...Approved... by the Research Ethics Committee.

Signature of the REC Chair, Professor John Foreman:

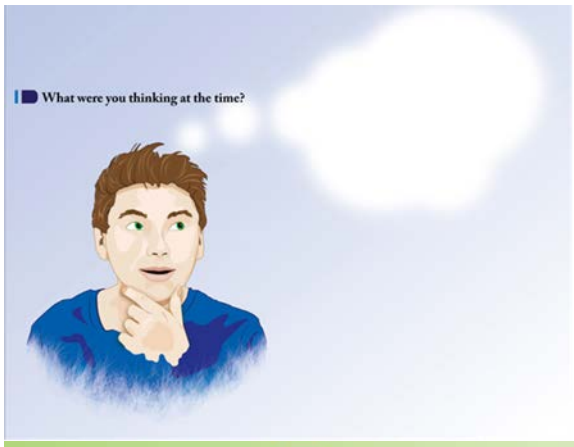
Date: 07/01/2016.

Appendix K: Materials needed for the intervention

K1) Restorative Questions

1. Can you tell me what happened?
2. What were you thinking at the time?
3. How were you feeling at the time?
4. Who has been affected by what you've done? And in what way?
5. What do you need to do to put things right and everyone can move on?

K2) Visuals for questions 2-5



K3) Restorative Conversation Guidelines

Did I create a safe environment by:	**Yes**	**No**
Showing interest in what they are saying		
Allowing enough time for the conversation to take place		
Making sure the room is comfortable, quiet and private enough to have the conversation		
Did I set ground rules?		
Letting everyone know that they will have a turn.		
Making sure everyone shows respect to everyone.		
Did I start with the wrongdoer (if possible)?		
Have I used the 5 questions?		
Did I allow the students to come up with their own solutions?		
Did I use the needed skills?		
Staying curious		
Active Listening (listening to feelings and words)		
Reflecting Back (creative questioning)		
Be patient/ allowing silence		

Appendix L: School Information sheet

Restorative Conversation, a differentiated way of dealing with Peer Conflict

Your school is being invited to take part in this research project. Please take time to read this information sheet carefully and if there is anything that is not clear, or if you would like more information, please contact Valeria Troya-McCann.

Main researcher: Valeria Troya-McCann

Supervisors: Dr Benjamin Hayes (UCL) and Dr Susan Birch (Bucks EPS)

Contact details: or phone to leave a message and your contact details).

Who are the researchers?

I am a second year Trainee Educational Psychologist from University College London (UCL). I am currently undertaking a work placement at Bucks Educational Psychology Service.

UCL committee of Ethics have approved this project (Ref. Number: 7355/001).

What is a Restorative Conversation?

Restorative Conversation is a behavioural intervention based on Restorative Justice (RJ) principles. RJ is a valued-based approach to responding to wrongdoing and conflict. RJ is increasingly being used in schools both nationally and internationally, which offers an alternative to punitive approaches to managing students' behaviour and relationships. Within RJ, misbehaviour is considered a breach to human relationships rather than to school rules, and a focus on repairing relationships is prioritised rather than a focus on blame and punishment.

RJ uses the incident of misbehaviour as an educative opportunity for repairing the harm, by fostering more socially responsible relationships and behaviours that take others' perspectives into account. This is achieved through carefully structured opportunities for individuals to understand the impact of their actions, recognise their social responsibilities and make amends to those who have been affected.

A restorative conversation preserves the values of the RJ approach in restoring the relationship between students by encouraging them to reflect on their own thoughts, feelings and behaviour, and still find ways to repair the harm between each other. However, restorative conversation is more concise and a quicker way of dealing with a problem right after it has happened.

The aim of the study

The aim of the study is to find out whether a restorative conversation promotes good behaviour and better relationships among pupils with interpersonal conflict.

Peer Conflict in this study is defined as:

*'**Peer conflict** refers to mutual disagreement or hostility between peers or peer groups. It is characterized as conflict between people of equal or similar power (friends); it occurs occasionally; it is unplanned; and it does not involve violence or result in serious harm. Perpetrators of peer conflict do not seek power or attention. However, peer conflict can escalate into violence. Those involved in violence and aggression usually have comparable emotional reactions, demonstrate some remorse, and actively try to resolve the problem'* (Sidorowicz & Hair, 2009).

In other words, students who often get involved in disagreements, quarrels and/or fights with their peers. This behaviour is already becoming a concern to school staff.

Some children find it difficult to behave well in school, interact with others and understand how their behaviour can affect them. As a result, they can do things that can upset and hurt others. When this happens, most schools will try to correct this behaviour but certain methods don't necessarily help students understand why their actions caused hurt and upset. They are also not always given the opportunity to 'repair the harm', restore the relationship and be able to move on. For this reason, we hope that our findings will help understand whether a restorative conversation produces positive change in students' behaviour, way of relating to others and help them understand and manage their emotions.

Who can take part in this project?

- Students between the ages of 8 and 11 who are nominated by their teachers and then by their peers by a 'peer nominated questionnaire' called 'Guess Who?'
- Students who are not considered 'bullies' or are taking part in bullying behaviour.
- Students who are not considered 'violent' or 'aggressive'.
- Students who are not at risk of exclusion in the next six months.

What goes beyond a Restorative Conversation? – Serious incidents such as:

- Physical aggression between pupils (depending the degree and the result of the 'fight', e.g. injuring others)
- Physical aggression towards teachers
- Injuring themselves
- Serious verbal abuse towards teachers and or peers
- Bullying
- Incidents of racism
- Vandalising school property
- Carrying illegal objects: 'knives or weapons, alcohol, illegal drugs, stolen items, tobacco and cigarette papers, fireworks, pornographic images or articles that have been or could be used to commit an offence or cause harm.' (DfE, 2014)

What will happen if a student of this school takes part?

The researcher will offer a free INSET training to all the teachers and/or Learning Support Assistants (LSAs) that work directly with students. This training will introduce the main values and principles of RJ, skill the teachers/LSAs in how and when to use the restorative conversation, and provide free resources for the intervention to be successful.

Once the training has been delivered and specific students identified (as well as parental consent obtained), the teachers or LSAs will be asked to use restorative conversation when conflict occurs. They will also need to keep an observation schedule of the students' behaviour. This will be carried out with a simple and short pro-social and negative behaviour checklist. The observations will take place during specific times of the day when the students have more conflicts with other students (e.g. play time).

Before and after the intervention, the researcher will collect information from the teachers and students via two brief questionnaires.

The researcher will visit the schools periodically and meet with the teachers or LSAs if necessary.

What will the school need to do?

The school will need to make available 1.5 hours of INSET training for teachers or LSAs that work directly with the selected students, as well as a commitment to use restorative conversation with the targeted students when an incident happens. The school staff (e.g. LSA) will also need to collect the data with a short checklist once a day.

What are the potential benefits for the school?

The school will receive a free INSET training on dealing with interpersonal conflict s using restorative conversations, as well as tools to support the approach (a set of questions and visual aids). Teachers and LSAs will also learn active listening skills to support the process, and the school will see potential improvement in the selected students' behaviour.

How to contact the researchers

If you are interested in taking part please contact Valeria Troya-McCann on the email address above. I will be happy to give you more details about the project, answer any questions you might have and arrange a convenient time to deliver the training.

I look forward to hearing from you!

Appendix M: Whole class parent information sheet

Restorative Conversation

Your child is being invited to take part in a research project. Before you and your child decide whether you would like to take part, it is important for you to know why the research is being done and what it will involve. Please take time to read this information sheet carefully and discuss it with others if you wish. If there is anything that is not clear, or if you would like more information, please do not hesitate to contact Valeria Troya-McCann, email: valeria.lopez.14@ucl.ac.uk or phone 07710-146990 (to leave a message and your contact details).

The aim of the study
The aim of the study is to find out whether a restorative conversation promotes good behaviour and better relationships among pupils who struggle to get along with other students. We will be encouraging participants to become more aware of their own thoughts and feelings as well as those of others. The study will also explore any connections between students' behaviour and the way they perceive their own emotions.

Why is the study being done?
Some children find it difficult to interact with others and understand how their behaviour can affect them. As a result, they can do things that can upset and hurt others. When this happens most schools will punish this type of behaviour but this punishment doesn't necessarily help them understand why their actions caused hurt and upset. They are also not always given the opportunity to 'repair the harm', restore the relationship and be able to move on. For this reason, we hope that our findings will help understand whether a restorative conversation produces positive change in students' behaviour and help them understand and manage their emotions.

What will happen if my child takes part?
If you agree for your child to take part in this research, your child will complete a questionnaire in their classroom with the rest of their classmates; depending on the results, your child might be selected for this study. If your child meets the criteria to participate, you will be contacted again with more information. The questionnaire will take about 15 minutes and the class teacher or another adult will be present throughout the session. The researcher will visit the school to make sure that your child understands what he/she will be doing and give him/her an opportunity to ask questions.

What will your child be asked to do?
Fill in a brief questionnaire with few questions. He/she will do this in their classroom with their classmates. Their teacher will be present throughout the whole time.

Are there any risks of discomforts?
We do not anticipate any risks to the students taking part in this study. We will liaise with your child's class teacher to ensure that they do not miss any important lessons. Your child is also welcome to skip any questions he/she does not want to answer and this will be explained to him/her. Most children enjoy completing the questionnaires, however, if your child is upset after taking part, they will be given the opportunity to talk with either their teacher privately or the researcher.

If at any stage of the process your child discloses any information that could put him/her in serious harm to self or others; we will need to communicate this information to the safeguarding person in the school and make sure your child and/or others are safe.

What are the potential benefits?
We hope that by exploring other ways of encouraging positive behaviour and restoration of broken relationships will help inform future behavioural policies within schools. In addition, learning whether making children aware of how they perceive their own thoughts and feelings increases the likelihood of positive behaviour and social interaction; it will encourage schools to invest in students' emotional development.

Do I have to take part in this study?
It is up to you and your child whether or not you take part in this study. If you decide to take part, your child will be asked to sign a consent form at school. If you decide now, or at a later date, that you do not wish to participate in this research you are free to withdraw.

Who will have access to the research records?
All information collected from you and your child during the course of this research will be kept strictly confidential.

The use of some types of personal information is safeguarded by the Data Protection Act of 1998 (DPA). The DPA places an obligation on those who record or use personal information, but also gives rights to people about whom information is held.

How to contact the researchers
Valeria Troya-McCann, email or Dr Benjamin Hayes, emai

We will be talking through the study with your child and asking whether or not they would like to take part. Even if you are happy for your child to take part, they will still be able to decide for themselves. If you **DON'T want your child to take part, please return the enclosed form to your child's teacher by 29th January.**

……

Parent Consent Slip

If you DO NOT want your child to take part in this study, please fill in this slip and return it to the school.

I would NOT like my child to take part in this study ☐

Parent / Guardian:……..

Child's Name: ……

School:……

Signed:…….

Date: …….

Appendix N: Specific student – parent information sheet

Restorative Conversation

Your child is being invited to take part in a research project. Before you and your child decide whether you would like to take part, it is important for you to know why the research is being done and what it will involve. Please take time to read this information sheet carefully and discuss it with others if you wish. If there is anything that is not clear, or if you would like more information, please do not hesitate to contact Valeria Troya-McCann, email: or phone

(to leave a message and your contact details).

The aim of the study
The aim of the study is to find out whether a restorative conversation promotes good behaviour and better relationships among pupils who struggle to get along with other students. We will be encouraging participants to become more aware of their own thoughts and feelings as well as those of others. The study will also explore any connections between students' behaviour and the way they perceive their own emotions.

Why is the study being done?
Some children find it difficult to interact with others and understand how their behaviour can affect them. As a result, sometimes they can do things that can upset and hurt others. When this happens most schools will punish this type of behaviour but this punishment doesn't necessarily help them understand why their actions caused hurt and upset. They are also not always given the opportunity to 'repair the harm', restore the relationship and be able to move on. For this reason, we hope that our findings will help understand whether a restorative conversation produces positive change in students' behaviour and help them understand and manage their emotions.

What will happen if my child takes part?
If you agree for your child to take part in this research, your child will complete one questionnaire at the beginning and end of the research. He/she will also be observed at certain times of the day by either his/her teacher or teaching assistant. The questionnaire will take about 10 minutes and the class teacher or another adult will be present throughout the session. The researcher will visit the school to make sure that your child understands what he/she will be doing and give him/her an opportunity to ask questions.

During the observations, an adult will look out for specific behaviours and record this information. The student will not be told when this happens so natural behaviour is observed.

What will your child be asked to do?
He/she will be asked to complete one questionnaire at school and be part of a restorative conversation every time he/she has a problem with another student. A

restorative conversation will encourage them to think about their thoughts and emotions and then give them the opportunity to sort things out.

Are there any risks of discomforts?
We do not anticipate any risks to the students taking part in this study. We will liaise with your child's class teacher to ensure that they do not miss any important lessons. Your child is also welcome to skip any questions he/she does not want to answer from the questionnaire and this will be explained to him/her. Your child will also have the choice on whether to engage in the restorative conversation or not, however, he/she will be encouraged to do so.

If at any stage of the process your child discloses any information that could put him/her in serious harm to self or others; we will need to communicate this information to the safeguarding person in the school and make sure your child and/or others are safe.

What are the potential benefits?
We hope that by exploring other ways of encouraging positive behaviour and restoration of broken relationships will help inform future behavioural policies within schools. In addition, learning whether making children aware of how they perceive their own thoughts and feelings increases the likelihood of positive behaviour and social interaction; it will encourage schools to invest in students' emotional development.

Do I have to take part in this study?
If you decide to take part, your child will be asked to sign a consent form at school. If you decide now, or at a later date, that you do not wish to participate in this research you are free to withdraw.

Who will have access to the research records?
All information collected from you and your child during the course of this research will be kept strictly confidential.

The use of some types of personal information is safeguarded by the Data Protection Act of 1998 (DPA). The DPA places an obligation on those who record or use personal information, but also gives rights to people about whom information is held.

How to contact the researchers
Valeria Troya-McCann, email or Dr Benjamin Hayes, email

We will be talking through the study with your child and asking whether or not they would like to take part. Even if you are happy for your child to take part, they will still be able to decide for themselves. If you **want your child to take part, please return the enclosed form to your child's teacher.**

……

Parent Consent Slip

If you want your child to take part in this study, please fill in this slip and return it to the school.

I would like my child to take part in this study ☐

Parent / Guardian:……..

Child's Name: ……

School:……

Signed:…….

Date: …….

Appendix O: Information sheet for the whole class

Information sheet for the whole class

Restorative Conversation

We would like to invite you to take part in this research project.

Please read the following information carefully and ask us any questions if there is something that is not clear or you would like more of an explanation. You can talk with others about this project if you wish.

Who are we?
We are a team of researchers from University College London.

What is the study about?
Some children find it hard to get along with other people at school and this sometimes causes them to behave in ways they shouldn't such as arguing with other students.

Our team would like to learn whether teachers can help those students behave better at school, get along with everyone, and learn to manage feelings in a different way.

Who is being invited to take part?
We are asking everyone who is 8 to 11 years old to take part.

Are there any benefits of taking part?
Some children who take part in the study will have the opportunity to learn a new way of dealing with problems at school by having a conversation with their teachers and their classmates.

What will I be asked to do?
We will ask you to fill in a questionnaire about how some of your classmates behave with you and other children.

Will I be chosen?
Only children who get a particular score on the Guess Who? questionnaire will be invited to take part in the project. This is because we want to find out whether this type of conversation help some students more than others.

Are there any risks of taking part?
We don't think that there will be any risks in taking part. We will be asking you about your feelings and thoughts on some negative moments at school so if you feel upset and do not want to continue we can stop. Please tell your teacher or the researcher if you want to talk about anything in private.

What will the information be used for?
The information you give is private. The information we collect from you will be kept secure by using identification numbers instead of your name.

However, if we think what you have told us could put you or another person at risk of harm, then we will have to pass this information onto the school to make sure you and others are safe.

Do you want to join in?
It is up to you to decide whether to take part in our research but we will be delighted if you do!

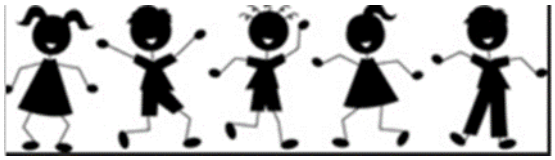
Do you want to know anything else?
If you have any questions, please ask your teacher or the researcher. You can also make contact with us using the address at the bottom of this sheet.

This study has been approved by the UCL Research Ethics Committee (7355/001):

The researchers are:
Valeria Troya-McCann and
Dr Bejamin Hayes

University College London,
26 Bedford Way, London. WC1H 0AP

Appendix P: Information sheet for targeted students



Information sheet for selected children

Restorative Conversation

We would like to invite you to take part in this research project.

Please read the following information carefully and ask us any questions if there is something that is not clear or you would like more of an explanation. You can talk with others about this project if you wish.

Who are we?
We are a team of researchers from University College London.

What is the study about?
Some children find it hard to get along with other people at school and this sometimes causes them to behave in ways they shouldn't such as arguing with other pupils.

Our team would like to learn whether teachers can help those students behave better at school, get along with everyone, and learn to manage feelings in a different way.

Who is being invited to take part?
We are asking children who sometimes find it difficult to behave at school, or who struggle to keep good relationships with other children to take part.

Are there any benefits of taking part?
Some children who take part in the study will have the opportunity to learn a new way of dealing with problems at school by having a conversation with their teachers and their classmates. You will also help us to help other children who are going through similar things.

What will I be asked to do?
We will ask you to fill in 1 questionnaire about your thoughts and feelings, how you control them, and how you get along with other students.

Also, every time you find it difficult to get along with another student, your teacher (or another adult from the school) will talk to you using a short

conversation and encourage you to think about what has happened and how things can be done differently next time.

Are there any risks of taking part?
We don't think that there will be any risks in taking part. We will be asking you about your feelings and thoughts on some tricky moments at school so if you feel upset and do not want to continue we can stop. Please tell your teacher or the researcher if you want to talk about anything in private.

What will the information be used for?
The information you give is private. The information we collect from you will be kept secure by using identification numbers instead of your name.

However, if we think what you have told us could put you or another person at risk of harm, then we will have to pass this information onto the school to make sure you and others are safe.

Do you want to join in?
It is up to you to decide whether to take part in our research but we will be delighted if you do!

Do you want to know anything else?
If you have any questions, please ask your teacher or the researcher. You can also make contact with us using the address at the bottom of this sheet.

This study has been approved by the UCL Research Ethics Committee (7355/001):

The researchers are
Valeria Troya-McCann and
Dr Bejamin Hayes

University College London,
26 Bedford Way, London. WC1H 0AP

Thank you for reading this. You can keep this copy.

Appendix Q: Restorative Conversation Lay Summary

Restorative Conversation, a different way of dealing with Peer Conflict

Behavioural problems among students in schools are a common concern for educators and punitive approaches such as ‘zero tolerance’ are still, in some cases, the first port of call. These approaches have raised concerns due to the impact on students’ psychological wellbeing, as they fail to consider the causes and the context where behaviour takes place and ignore those very students who are probably in greatest need of social support and an education. Researchers have found that punitive policies such as ‘zero tolerance’ are associated with emotional harm, excessive enforcement efforts, and an increment in future delinquency resulting from a response to coercive control, as punishment makes a person resentful not reflective. An increasingly popular framework to deal with misbehaviour and conflict is Restorative Justice (RJ). Fundamentally RJ is different to punitive approaches as it focuses on encouraging students to reflect on their behaviour, amend the harm caused, and restore the relationships that have been affected.

The purpose of this study was to explore the impact that a shorter version of RJ, called **Restorative Conversation (RC),** had on reducing peer conflict incidents and promoting pro-social behaviour on five primary school students. Although RC is a simplified version of RJ, it preserves all its principles and values. A single case experimental study with multiple baseline was used. Findings indicate that the intervention significantly helped reduce peer conflict incidents in two students, even though a decreasing trend was witnessed in four of five students. This means that the use of RC on a daily basis can make a difference in the behaviour of some students.

Although the results may also indicate that the intervention did not have a direct impact on students' pro-social behaviour, previous research on the use of whole school restorative approaches have found significant improvement in tackling difficult behaviour, such as racist name calling, bullying, inter-personal conflict, victimisation, and in the number of fixed term exclusions. In addition, schools that consistently use whole school restorative approaches for more than two years have seen improvements in the overall school environment with more harmonious relationships among students.. For these reasons, it is still advisable that schools consider adopting the RJ framework at a holistic level while more research is undertaken in the use of an abridged version such as RC.

Appendix R: Emotional Literacy interventions and the development of students' EL skills

Title: How effective are Emotional Literacy interventions at enhancing students' emotional literacy skills in school?

Abstract:

Despite the extensive research on social and emotional learning programmes (SEL), this review is the first of its type to attempt to evaluate the efficacy of Emotional Literacy (EL) interventions and the impact they have on enhancing students' EL skills only. While in practical terms teaching EL skills exclusively could be short-sighted, it is nevertheless theoretically important to explore the possibility of emotions and 'affect' as a separate outcome from other constructs such as social skills. EL interventions are school programmes designed to instruct students on how to recognise, understand, handle and appropriately express emotions. Thirteen studies met the inclusion criteria and findings reported a pattern of small and at times non-existent effect sizes. Consequently, the impact of EL interventions was found to be limited in promoting students' EL skills. However, other areas such as social skills, academic achievement and behavioural difficulties showed significant improvements suggesting that EL interventions are still worth investing in. Recommendations on how research in this area can be improved and how the interventions can be developed into stronger educational programmes are discussed.

Appendix S: Restorative Conversation and students' peer Conflict and Pro-social behaviour

Title: Restorative Conversation, a different way of dealing with Peer Conflict

Abstract:

This single case experimental study with multiple baseline explored the impact that Restorative Conversation (RC) had in reducing peer conflict incidents and promoting pro-social behaviour in five primary school students. Restorative Conversation is a simplified version of the restorative conference from Restorative Justice (RJ). It is theoretically grounded in the values and principles of RJ of encouraging students to reflect in their behaviour, amend the harm and restore the relationship that has been damaged. Three months of data was obtained from direct observations of the students' behaviour. Analysis involved visual analysis, PEM and Tau-U effect sizes. Overall, the intervention showed a decreasing trend in peer conflict incidents in four of the five participants, however, only two of these results were found to be statistically significant. Findings in relation to pro-social behaviour appeared to be contradictory and two significant but negative effects were found. Fidelity of implementation was maintained, suggesting the intervention is appropriate for delivery in school settings. Students' and teachers' feedback supported the social validity of the programme. Recommendations for future research and discussion of the limitations are discussed.